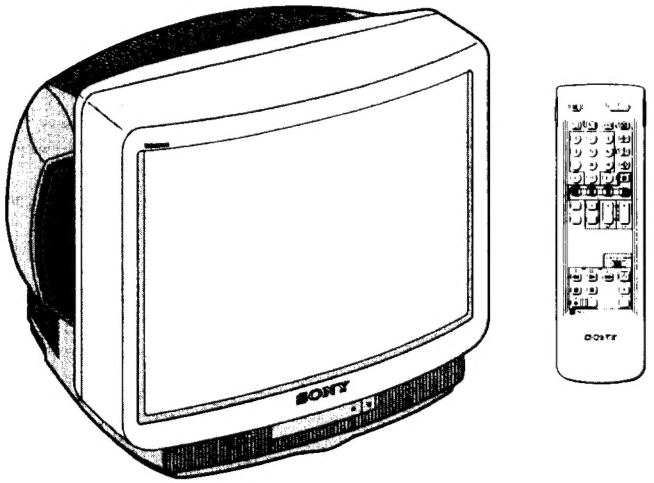
SERVICE MANUAL

BE-3B CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-X2101D	RM-833	AEP	SCC-G77E-A	KV-X2103E	RM-833	Spanish	SCC-G82D-A
KV-X2101A	RM-833	Italian	SCC-G81D-A	KV-X2102L	RM-833	IRISH	SCC-G83C-A
KV-X2100B	RM-833	French	SCC-G85D-A	KV-X2102U	RM-833	UK	SCC-G87C-A
KV-X2101B	RM-833	French	SCC-G84C-A	KV-X2101K	RM-833	OIRT	SCC-G86C-A



MICROFILM

TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television System	Stereo System	Channel Coverage	Color System
AEP	B/G/H, D/K	GERMAN Stereo	PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
Italian	B/G/H	GERMAN Stereo	ITALIA VHF:A-H2 (C) UHF: 21-69 PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10	PAL NTSC4.43, NTSC3.58 (VIDEO IN)
French	B/G/H, L, I	GERMAN Stereo	L VHF:F02-F10 UHF:F21-F60 CABLE:B-Q B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 I UHF:B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
Spanish	B/G/H	GERMAN/NICAM Stereo	PAL B/G VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69	PAL NTSC4.43, NTSC3.58 (VIDEO IN)
Irish	I	NICAM Stereo	VHF A-C, D-J, UHF 21-69 CABLE CHANNELS S1-S20 HYPERBAND S21-S41	PAL NTSC4.43, NTSC3.58 (VIDEO IN)
UK	I	NICAM Stereo	UHF : B21-B69	PAL NTSC4.43, NTSC3.58 (VIDEO IN)
OIRT	B/G/H, D/K	GERMAN Stereo	B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)

MODEL	AEP	Italian	French Text	French Non Text	Spanish	Irish	UK	OIRT
Power Consumption	89W	89W	89Wh	89W	89W	117W	117W	89W

SPECIFICATIONS

Picture Tube — Hi-Black Trinitron
Approx. 54.5 cm (21 inches)
(Approx. 51 cm picture measured diagonally)
100° -deflection

Input/Output Terminals

[REAR]

- 1 21-pin Euro connector (CENELEC standard)
  - inputs for audio and video signals
  - inputs for RGB
  - outputs of TV video and audio signals
- 2/S 2 21-pin Euro connector
  - inputs for audio and video signals
  - inputs for S video
  - outputs for audio and video signals (selectable)

[FRONT]

- 3 Video input - phono jack
- 3 Audio inputs - phono jacks
- S 3 S video input 4-pin DIN
- Ω Headphone jacks : stereo minijack

Sound output	2 x 20W (Music power)
Power requirements	220 - 240V
Dimensions	Approx. 512x449x482 mm
Weight	Approx. 23kg
Supplied accessories	RM-833 Remote Commander (1) IEC designation R6 battery (1)
Other features	NICAM , FASTEXT, TOPTEXT.

[RM-833]

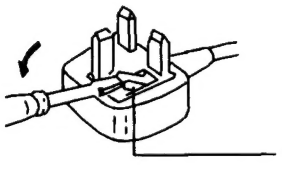
Remote control system	infrared control
Power requirements	1.5V dc 1 battery IEC designation R6 (size AA)
Dimensions	Approx. 65x225x21 mm (w/h/d)
Weight	Approx. 157g (Not including batteries

Design and specifications are subject to change without notic

Item \ Model name	KV-X2101D	KV-X2101A	KV-X2100B	KV-X2101B	KV-X2103E	KV-X2102L	KV-X2102U	KV-X2101K
Pal Comb	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
PIP	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
RGB Priority	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
Woofer Box	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Scart 1	ON	ON	ON	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON	ON	ON	ON
Scart 4	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Projector	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON	ON	ON	ON	ON
Norm B/G	ON	ON	ON	ON	ON	OFF	ON	ON
Norm I	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
Norm D/K	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
Norm AUS	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Teletext	ON	ON	OFF	ON	ON	ON	ON	ON
Nicam Stereo	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
Language Preset	Deutch	Italian	French	French	Spanish	English	English	OIRT

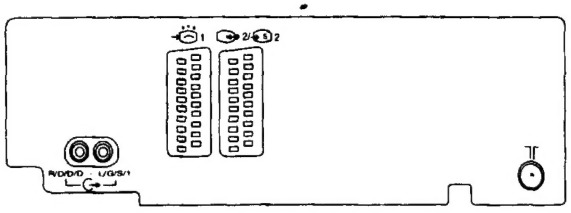
WARNING (KV-X2102L / KV-X2102U only)

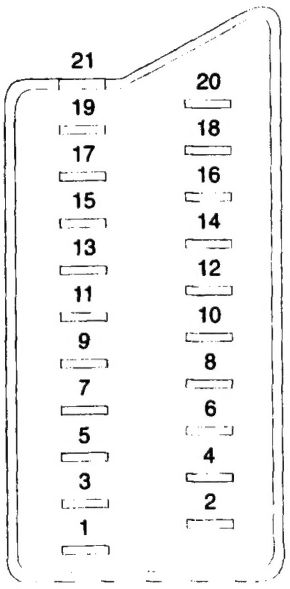
The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the ASTA mark.
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME, IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.
When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.
Open the fuse compartment with the screwdriver blade and replace the fuse.

1 pin connector (1 2 / 4)





Pin No.	1	2	4	Signal	Signal level
1	○	○	○	Audio output B (right)	Standard level : 0.5V rms Output impedance :Less than 1kohm*
2	○	○	○	Audio input B (right)	Standard level : 0.5V rms Output impedance :More than 10kohm*
3	○	○	○	Audio output A (left)	Standard level : 0.5V rms Output impedance :Less than 1kohm*
4	○	○	○	Ground (audio)	
5	○	○	○	Ground (blue)	
6	○	○	○	Audio input A (left)	Standard level : 0.5V rms Output impedance :More than 10kohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More than 10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (green)	
10	○	○	○	Open	
11	○	●	●	Green	Green signal : 0.7 ± 3dB, 75 ohms, positive
12	○	○	○	Open	
13	○	○	○	Ground (red)	
14	○	○	○	Ground(blanking)	
15	○	—	—	Red input	0.7 ± 3dB, 75 ohms, positive
	—	○	○	(S signal) croma input	0.3 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75ohms
17	○	○	○	Ground(video output)	
18	○	○	○	Ground(video input)	
19	○	○	○	Video output	1V ± 3dB,75ohms,positive sync:0.3V(-3+10dB)
20	○	—	—	Video input	1V ± 3dB,75ohms,positive sync:0.3V(-3+10dB)
	—	○	○	Video input Y (S signal)	1V ± 3dB,75ohms,positive sync:0.3V(-3+10dB)
21	○	○	○	Common ground (plug, sheild)	

○ Connected ● Not Connected (open) * at 20Hz - 20kHz

Pin No	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm , positive Sync. 0.3V -3/+10 dB
4	C (S signal) input	0.3V ± 3dB 75 ohm , positive Sync.

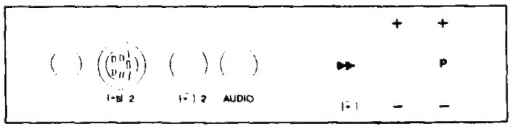


TABLE OF CONTENTS

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVAL OF THE ANODE CAP.

WARNING !!

AN ISOLATING TRANSFORMER SHOULD BE USED DURING ANY SERVICE WORK TO AVOID POSSIBLE SHOCK HAZARD, DUE TO A LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARKED ! ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLIMENTS PUBLISHED BY SONY.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENTION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÈ LORS DE TOUT DÈPANNAGE. LE CHÁSSIS DE CE RÈCEPTEUR EST DIRECTEMENT RACCORDÈ Á L'ALIMENTATION SECTEUR.

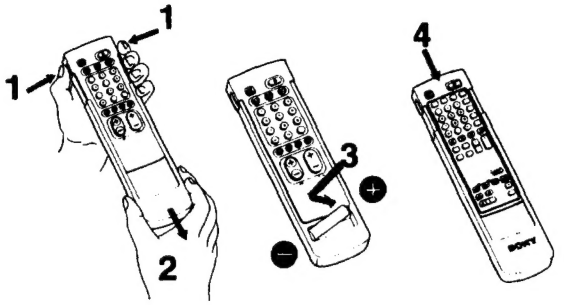
ATTENTION AUX COMPOSANTS RELATIFS Á LA SÈCURITÈ !!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ! SUR LES SCHÈMAS DE PRINCIPE, LES VUES EXPLOSÈES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÈCURITÈ DU FONCTIONNEMENT, NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÈRO DE PIÈCE EST INDIQUÈ DANS LE PRÈSENT MANUEL OU DANS DES SUPPLÈMENTS PUBLIÈS PAR SONY.

The operating instructions mentioned here are partial abstracts fro the Operating Instruction Manual. The page numbers of th Operating Instruction Manual remain as in the manual.

Getting Started

Inserting the Battery Into the Remote Commander



Remove the cover.

Check the correct polarity.

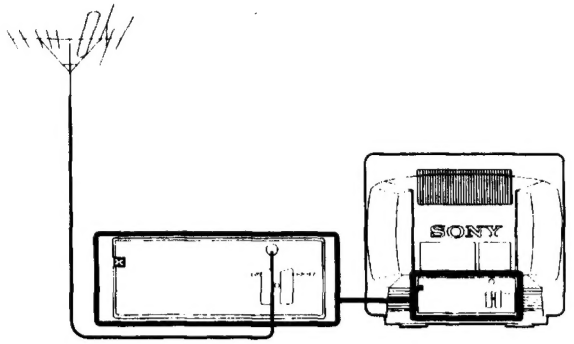
Refit the outside cover making sure that the Full Function side is visible.

About Battery Life

Under normal operation, a battery will last up to half a year.

Connecting the Aerial

Connect aerial to the ⅂ socket at the rear of the TV. (cable not supplied)



Choosing a Language

(See inside of front cover and back cover)

1 Depress ⏻ [A] on the TV.
The TV turns on. If the standby indicator [B] on the TV is lit, press ▭ [3] or any number button [4] on the Remote Commander.

2 Press MENU [7] on the Remote Commander.
The SELECT LANGUAGE screen appears.

MENU

3 Press one of the colour buttons [17] on the Remote Commander to select a language (Press the white button [17] to display other language alternatives).
The SELECT LANGUAGE screen clears and all subsequent menus appear in the chosen language.

SELECT LANGUAGE

- ENGLISH
- DEUTSCH
- FRANÇAIS
- ITALIANO
- MORE

SELECT COL. BUTTON

Note: From the second time when you turn on the TV, the MENU screen appears instead of the SELECT LANGUAGE screen. Press the yellow button [17] then press the white button [17] to redisplay the SELECT LANGUAGE screen.

Tuning in to Channels

You can tune in up to 60 channels to programme positions either automatically or manually.

auto tuning:	A single button press allows all receivable channels to be tuned. Use if you are unfamiliar with the channel numbers of stations.
manual tuning:	Use if you are familiar with the channel numbers of stations.

Choose the more appropriate way for you.

Tuning in to Channels Automatically

There are two possibilities for auto tuning;

A. On the TV: hold down ▶▶▯ [E] on the front of the TV for 2 seconds

or

B. On the Remote Commander: as follows

1 Press MENU [7].

2 Press the white button [17].

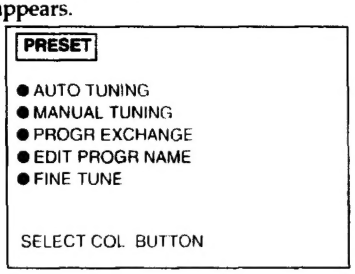
3 Hold down the red button [17] for 2 seconds.

Note: Press the green button [17] to cancel.

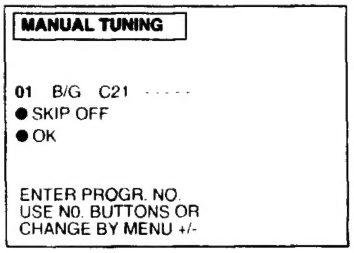
Tuning in to Channels Manually

1 **Press MENU [7].**
The MENU screen appears.

2 **Press the white button [17] to select PRESET.**
The PRESET screen appears.



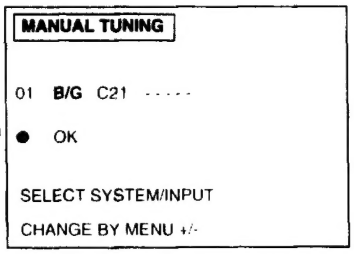
3 **Press the green button [17] to select MANUAL TUNING.**
The MANUAL TUNING screen appears.



4 **Press the number buttons [4] or MENU+/– [9] to select a programme position.**
If you use the number buttons [4], enter a double-digit number. (e.g. for programme number 4, first press 0, then 4)

5 **Press the green button [17].**

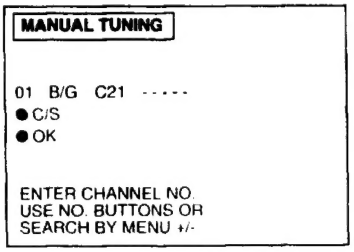
Note: Use MENU +/– [9] to select TV system. You can alternatively select input sources which may be assigned to programme positions. The display changes as follows:



B/G ⟷ D/K ⟷ AV1 ⟷ RGB ⟷ AV2 ⟷ YC2 ⟷ AV3 ⟷ YC3

6 **Press the green button [17].**

Note: If a video input source is selected in step 5, this is now stored. Refer to step 4 to tune other programme positions.



7 **When you have slected B/G, press the red button [17] to select C (regular channel) or S (cable channel).**

8 **Press the number buttons [4] or MENU+/– [9] to select the channel number.**
If you use the number buttons [4], enter a double-digit number. (e.g. for channel 23, first press 2, then 3)

9 **Press the green button [17] to store.**

Note: If you want to preset other channels, repeat steps 4 to 9.

10 **Press MENU [7] twice to return to the normal screen.**

Note: You can skip unused programme positions when selecting programmes with the PROGR +/– buttons [18]. Press the red button [17] to skip in step 4. However, the skipped programmes may still be called up when you use the number buttons.

Basic TV Operations

Turning the TV on and off

Turning on
Depress ⏻ [A] on the TV.

Turning off temporarily
Press ⏻ [10] on the Remote Commander.
The TV enters standby mode and the standby indicator [B] on the front of the TV lights up.

Turning on again
Press ⬭ [3], PROGR+/– [18], or one of the number buttons [4] on the Remote Commander.

Turning off completely
Depress ⏻ [A] on the TV.
Note: It is recommended to use ⏻ [A] to turn off the TV. This could help you save energy.

Selecting TV Programmes

Press PROGR+/– [18] or press number buttons [4].

To select a double-digit number
Press -/-- [5], then the number buttons [4].

Adjusting the Volume

Press ◿+/– [19].

Muting the Sound

Press 🔇 [1].
To resume normal sound, press 🔇 [1] again.

Displaying the On-screen Indications

Press ⓘ [14] once to display the on-screen indications.
Press again to make the indications disappear.

Operating the TV Using the Buttons on the TV

With the buttons on the TV, you can adjust or select the functions as follows:

Press ◿+/– [D] to adjust the volume.
Press P+/– [C] to select programme numbers or to turn the TV on from the standby mode.
Press ⏎ [F] to select the input source.
Press ▶▶| [E] to preset channels automatically.

Advanced TV Operations

Operating the Menu System

You can adjust picture and sound, preset channels to programme positions and utilise other convenient features by using the following menu system.

Press;		to;
1	MENU [7]	enter the MENU screen
2	a colour button [17]	select an item you want to change (The selected item is marked by a triangle.)
3	MENU+/– [9]	change (or adjust) the contents of the item
4	MENU [7]	return to the MENU screen
5	MENU [7] again	return to the normal screen
Press MENU [7] once or twice whenever you want to return to the normal screen.		

Note: When selecting menus, the picture becomes darker. If, however, an item in the PICTURE ADJUSTMENT menu is selected, normal level of TV picture is restored to allow the best adjustment.

Adjusting the Picture and Sound

Although picture and sound are adjusted at the factory you can adjust them to suit your own taste.

1 Press MENU [7].
The MENU screen appears.

2 Press the red button [17] to select PICTURE or the green button [17] to select SOUND.

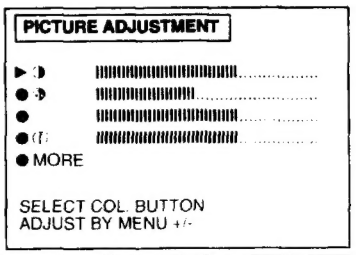
3 Press the respective colour button [17] to select an item.

4 Press MENU +/– [9] to adjust.

5 Press MENU [7] twice or wait until the menu displays disappear automatically to return to the normal screen.

PICTURE ADJUSTMENT

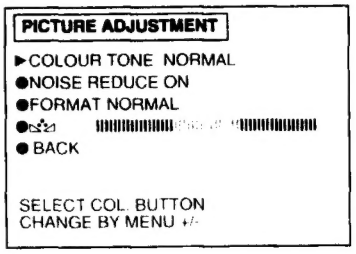
(First Page)



Press colour button	Effect
Red: For Picture ◑	Less —|— More
Green: For Colour ◕	Less —|— More
Yellow: For Brightness ○	Darker —|— Brighter
Blue: For Sharpness ◫	Softer —|— Sharper
White:	Next page of PICTURE ADJUSTMENT

PICTURE ADJUSTMENT

(Second Page)

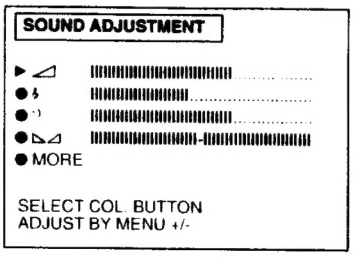


Press colour button	Effect
Red: For Colour Tone	Normal -> Warm (reddish colour tone) -> Cool (blueish colour tone)
Green: For Noise Reduce	ON: Reduces picture noise (in case of low signal level) OFF: Normal setting
Yellow: For Format	Normal: Normal setting 16:9 Wide screen effect
Blue: For Hue control (only for NTSC video signals)	Reddish —|— Greenish
White:	Back to first page of PICTURE ADJUSTMENT

Note: Press →•← [8] on the Remote Commander to reset to the factory preset levels for picture and sound.

SOUND ADJUSTMENT

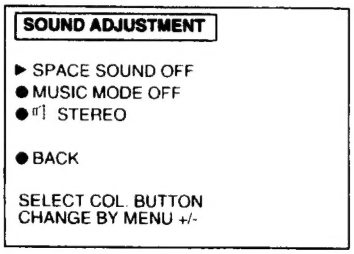
(First Page)



Press colour button	Effect
Red: For Volume	Less —|— More
Green: For Treble	Less —|— More
Yellow: For Bass	Less —|— More
Blue: For Balance	More left - more right
White:	Next page of SOUND ADJUSTMENT

SOUND ADJUSTMENT

(Second Page)



Press colour button	Effect
Red: For Space Sound	OFF: normal sound ON: for a special acoustic sound effect
Green: For Music Mode	OFF: normal sounds ON: when listening to music broadcast
Yellow: For Stereo:	Stereo -> Mono A (left channel) - > Mono B (right channel) -> Mono
White:	Back to first page of SOUND ADJUSTMENT

Note: Press ↩ 8 on the Remote Commander to reset to the factory preset levels for picture and sound.

Using Special Features

With your TV you can utilise special features such as Parental Lock or Sleep Timer .

1 **Press MENU 7.**
The MENU screen appears.

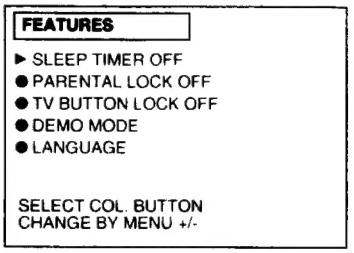
2 **Press the yellow button 17 to select FEATURES.**

3 **Press the respective colour button 17 to select an item.**

4 **Press MENU +/- 9 to change.**

5 **Press MENU 7 twice or wait until the menu displays disappear automatically to return to the normal screen.**

FEATURES



Press colour button	Effect
Red: For Sleep Timer (Automatic switch off function)	OFF -> 0:30 -> 1:00 -> 1:30 -> 2:00 (hours) After the selected time the TV set switches itself automatically into standby mode.
Green: For Parental Lock (For preventing children from watching programmes which you consider unsuitable)	OFF: Normal setting ON: The TV-channel you are watching is now blocked. In this way you can prevent undesirable broadcasts from appearing on the screen.
Yellow For TV Button Lock	OFF: Normal setting ON: The buttons on the TV do not function anymore. (The Remote Commander still operates)
Blue: For Demo Mode	ON: A sequence of menu pictures is displayed. Press any button on the Remote Commander to stop the function.
White: For Language	The SELECT LANGUAGE screen appears.

Advanced Presetting Functions

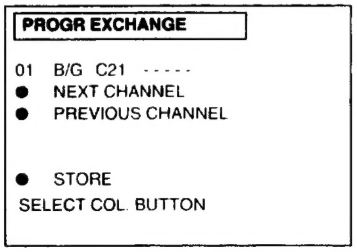
Exchanging Programme Positions

You can exchange the programme positions to a preferred order (example: exchange programme 09 (channel C21) with programme 15 (channel C24)).

1 Press MENU [7].
The MENU screen appears.

2 Press the white button [17].
The PRESET screen appears.

3 Press the yellow button [17].
The PROGR EXCHANGE screen appears.



4 Press the white button [17] repeatedly until the desired programme number (09) appears.

5 Press the red or the green button [17] repeatedly until the desired channel number (C24) appears.

6 Press the white button [17] to store.
Now the exchange has been completed. Channel C24 is tuned in to programme 09 and channel C21 is tuned in to programme 15.

7 Press MENU [7] twice to return to the normal screen.

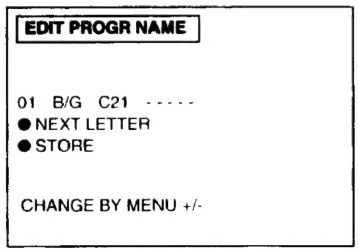
Editing Programme Names

You can edit the programme names up to five letters.

1 Press MENU [7].
The MENU screen appears.

2 Press the white button [17].
The PRESET screen appears.

3 Press the blue button [17].
The EDIT PROGR NAME screen appears.
The first character flashes.



4 Press MENU+/- [9] to edit the first letter.
The first letter changes as follows;

A ⟷ B ⟷ . . . ⟷ Z ⟷ 0 ⟷ 1 ⟷ . . . ⟷ 9 ⟷ "–" (space)

5 Press the red button [17] to move to the next letter.

6 Repeat steps 4 to 5, until the fifth letter is chosen.

7 Press the green button [17].
The programme name is stored, and the normal screen appears. To edit another programme name, repeat steps 1 to 7.

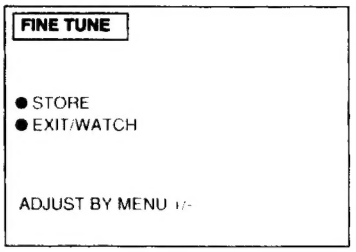
Fine Tuning

You can adjust the receiving condition by the FINE TUNE function.

1 Press MENU [7].
The MENU screen appears.

2 Press the white button [17].
The PRESET screen appears.

3 Press the white button [17] again.
The FINE TUNE screen appears.



4 Press MENU+/- [9] to adjust the receiving condition.

5 Press the red button [17] to store the adjustment, or press the green button [17] not to store.
Then the normal screen appears. If you have pressed the green button, the fine tuned condition is cancelled once you choose another programme.

Tuning in to a Channel Temporarily

You can tune in to a channel temporarily, even when it has not been preset.

1 Press C [16] on the Remote Commander. For cable channels, press C [16] twice.
The indicaton "C" ("S" for cable channels) appears on the screen.

2 Enter a double-digit channel number using the number buttons (e.g. for channel 23, first press 2, then 3).
The channel appears.
However, the channel is not stored.

Teletext Operation

TV stations broadcast teletext programmes via the TV channels. For basic operation of teletext, use the simple side of the Remote Commander. For the advanced features of teletext, use the buttons indicated in green on the full function side of the Remote Commander.

Basic Teletext Operation

Switching Teletext on and off

1 Select the channel which carries the teletext service you wish to view.

2 Press ≡ 11 to display Teletext.
If no teletext signal is broadcast, the indication P100 is displayed on a black screen.

3 Input three digits for the page number using the number buttons 4.
The numbers are displayed on the screen and the requested page appears in a few seconds.
Note: If you make a mistake, type in any three digits, then re-enter the correct page number.

4 Press ▢ 3 to return to the TV mode.

Note: To change the teletext channels. First press ▢ 3 to return to the TV mode, then repeat steps 1 to 3.
Note: If the signal of a TV channel is weak, teletext errors may occur.

Advanced Teletext Operation

Using Fastext

With Fastext you can access pages with one button press. When a Fastext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons 6 on the Remote Commander.
Press the corresponding colour button 6 on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed in a few seconds.

Requesting the Index page

Press ⓘ 17. The Index page appears.

Accessing the next or preceding page

Press ▲ (PAGE +) or ▼ (PAGE –) 18. The next or the preceding page appears on the screen.

Superimposing the teletext display on the TV picture

Press ≡ 11 once if you are in text mode or press ≡ 11 twice if in TV mode.
To return to the normal teletext display press ≡ 11 again.

Preventing a teletext page from being updated or changed

Press ⊜ (HOLD) 2. The HOLD symbol (⊜) appears on the screen and the selected subpage is held until you press ≡ 11 to cancel.

Enlarging the teletext display

Press ⊕ 13 once to enlarge the upper half. Press twice to enlarge the lower half. Press again to restore the normal display.

Revealing concealed information (e.g. answers to a quiz)

Press ? (REVEAL) 14. The information is revealed. Press ? 14 again to conceal the information.

Watching TV while waiting for a requested page to be displayed

1 Request a new teletext page.

2 Press ⊠(TEXT CL) 12.
The TV programme is displayed and the symbol ≡ is displayed at the top of the page.
Note: When the requested page is available the page number is displayed at the top of the screen.

3 Press ≡ 11 to view the page.

Note: To cancel the request
Display the teletext page, then press ≡ 11. The request is now cancelled. Press ▢ 3 to resume TV mode.

Using the Favourite Page system

You can store up to four of your favourite teletext pages per programme with the help of the Favourite page system. In this way you have quick access to the pages you watch frequently.

Storing the Favourite Pages

1 Select the page you would like to store using the number buttons 4.

2 Press ⇢ 15 twice.
The colour prompts at the bottom of the screen flash.

3 Press any of the colour buttons 6 on the Remote Commander to store the selected page.
The page is now stored on this button.

Repeat steps 1 to 3 for the other 3 pages available.

Displaying the Favourite pages

1 Press ⇢ 15.

2 Press the colour button 6 corresponding to the colour prompt onto which the desired page is stored.
The page is requested. (It may take a few seconds to be received).

Note: Step 1 must be taken before every favourite page selection, otherwise the normal Fastext facility operates.

Using the Time Function in the TV mode

Press ◻ 12 to request the time. Press again to cancel the request.
Note: This function is available only when teletext is broadcast.

Connecting Other Equipment

You can connect optional audio/video equipment to this TV such as VCRs, video disc players, cameras or stereo systems.

Connector	Acceptable input signal	Available output signal
1 M (AV1/RGB)	Audio/video and RGB signal	Audio/video signal from TV Tuner
2/S2 L (AV2) (YC2)	Audio/video and S video signal	Audio/video signal from selected source
3/3 G H (AV3)	Audio/video signal and	No outputs
3/S3 G I (YC3)	Audio/S video signal	

To watch a video input picture, press 2 until the desired video input appears.
To return to the normal TV picture, press 2 repeatedly or press 3.

Note: If you have a decoder, connect it to 1 M.

Connecting a VCR Using the TV Aerial Terminal

Connect the aerial output of the VCR to the aerial terminal K of the TV. It is recommended to tune in the VCR signal to programme number "0". For details, see "Tuning in to Channels Manually" on page 18.

Note: S video input (Y/C input) I L
Video signals may be separated into Y (luminance or brightness) and C (chrominance) signals.
Separating the Y and C signals prevents them from interfering with each other and therefore improves the picture quality (especially luminance). This TV is equipped with 2 video input terminals through which these signals can be input directly.

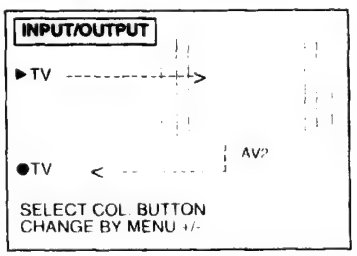
Checking and Selecting the Input and Output Sources Using the Menu

You can display a menu screen to see which input and output source are selected. You can also change the selection using this menu.

Checking the Input and Output Sources

1 Press MENU 7.
The MENU screen appears

2 Press the blue button 17 to select INPUT/OUTPUT.
The INPUT/OUTPUT screen appears.



Selecting an Input Signal

Press the red button 17 to select INPUT. Press MENU +/– 9 to select the desired input source.
You can select among the following sources:

TV ⇔ AV1 ⇔ RGB ⇔ AV2 ⇔ YC2 ⇔ AV3 ⇔ YC3

Selecting an Output Signal

The 2 /S2 connector L outputs the source input from the other connectors. Press the green button 17 to select OUTPUT. Press MENU +/– 9 to select the desired output source.

You can select among the following sources:

TV ⇔ AV1 ⇔ AV2 ⇔ YC2 ⇔ AV3 ⇔ YC3

Note: Press MENU 7 twice or wait until the menu displays disappear automatically to return to the normal screen.

Remote Control of Other Sony Equipment

You can use the TV Remote Commander to control most Sony remote-controlled video equipment such as: Beta, 8mm or VHS VCRs or video disc players.

Tuning the Remote Commander to the equipment

1 Set the VTR 1/2/3 MDP selector 20 according to the equipment you want to control:
VTR 1: Beta or VCR
VTR 2: 8mm VCR
VTR 3: VHS VCR
MDP: Video Disc Player

2 Use the buttons 21 to operate the additional equipment.

Note: If your video equipment is furnished with a COMMAND MODE selector: set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander.
Note: If the equipment does not have a certain function, the corresponding button on the Remote Commander will not operate.
Note: When you use the ● (record) button, make sure to press this button and the one to the right of it simultaneously.

Using Headphones

You can utilise headphones. Connect them to the headphone jack J, then the sound from the speakers goes off.
Note: You can't control the sound adjustment except for volume.

For your information

Troubleshooting

Here are some simple solutions to problems which may affect the picture and sound.

No picture (screen is dark), no sound

- Plug the TV in.
- Press ⏻ [A] on the TV. (If the standby indicator [B] is lit, press 📺 [3] or any number button [4] on the Remote Commander.)
- Check if the selected video source is on.
- Turn the TV off for three or four seconds and then turn it on again using ⏻ [A].

Poor or no picture (screen is dark), but good sound

- Press MENU [7] to enter the MENU screen, and press the red button [17], then adjust ◑ and ○.

Good picture but no sound

- Press 🔊+ [19].
- If 🔇 is displayed on the screen, press 🔇 [1].

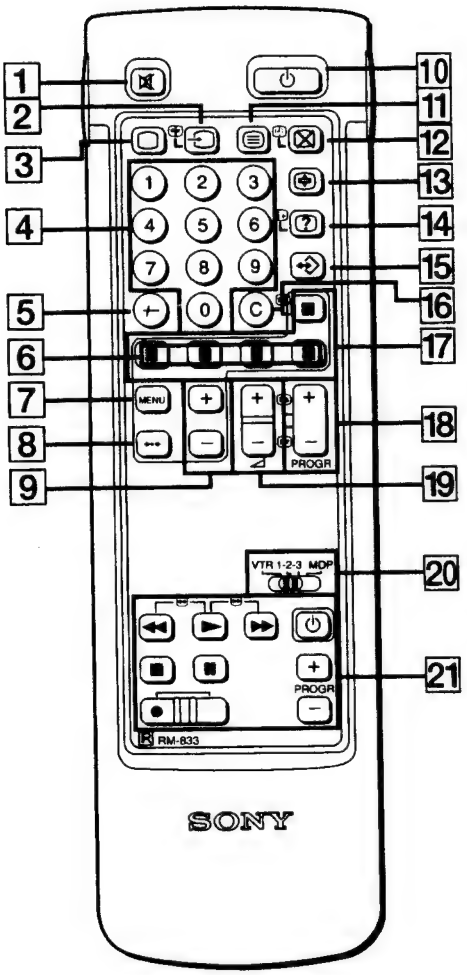
No colour for colour programmes

- Press MENU [7] to enter the MENU screen, and press the red button [17], then adjust ◑.

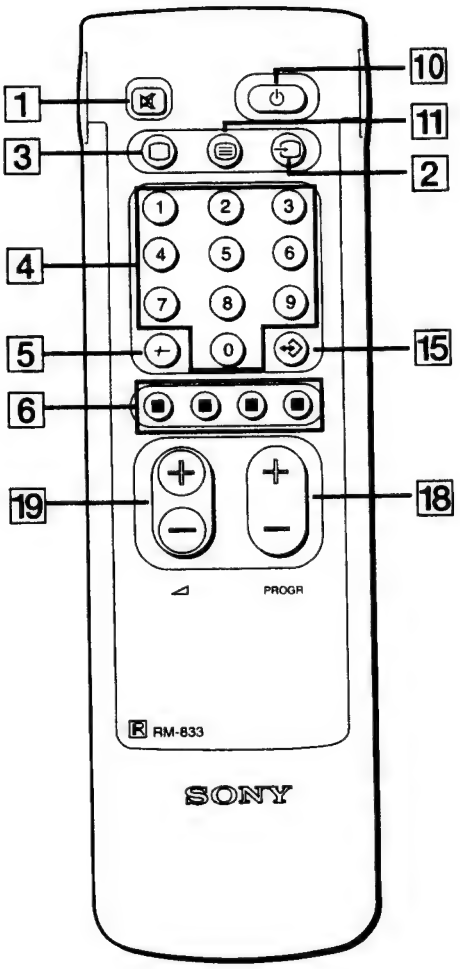
Remote Commander does not function

- Replace the battery.

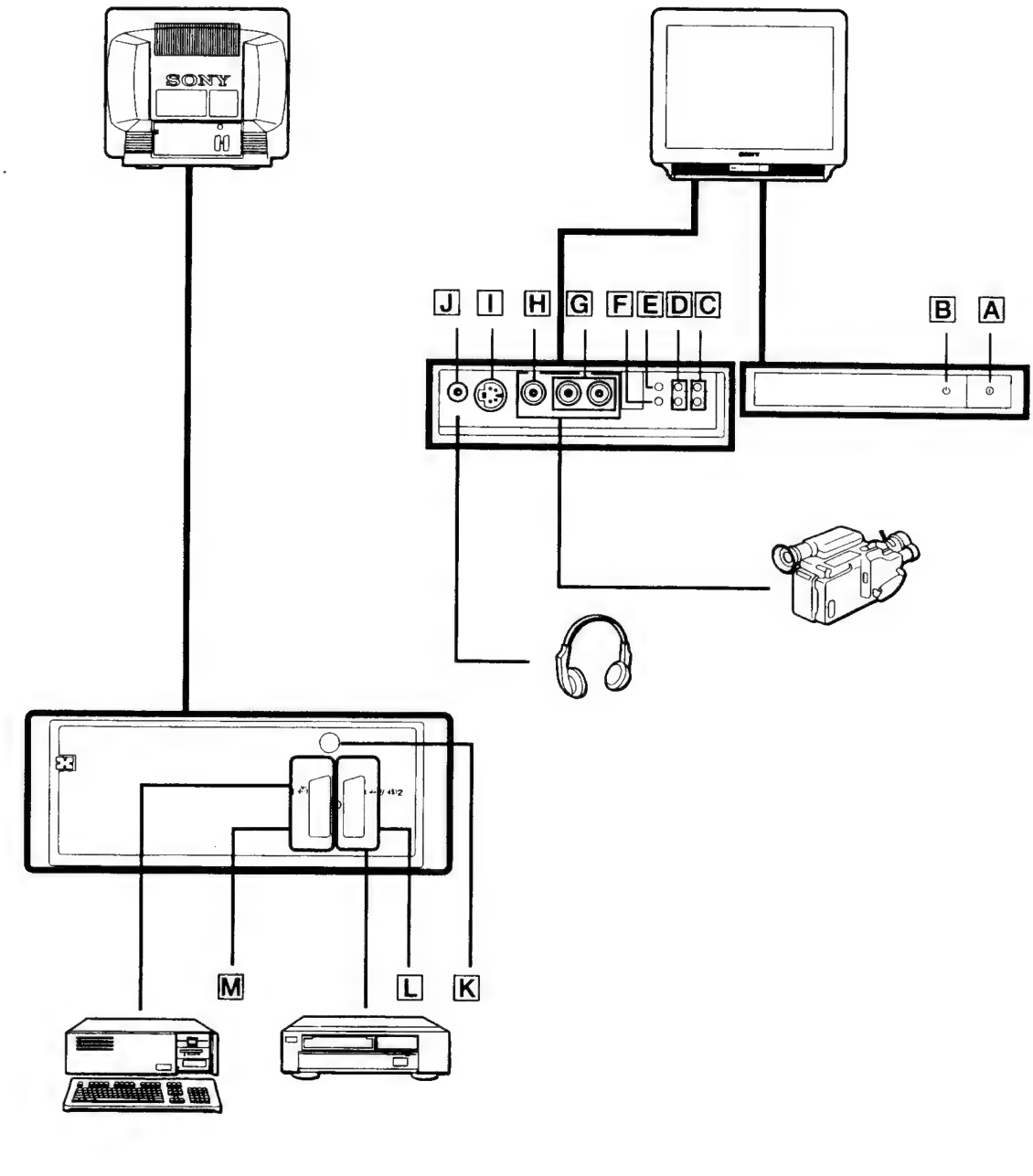
If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.



Full-Function Side



Simple Side


SONY
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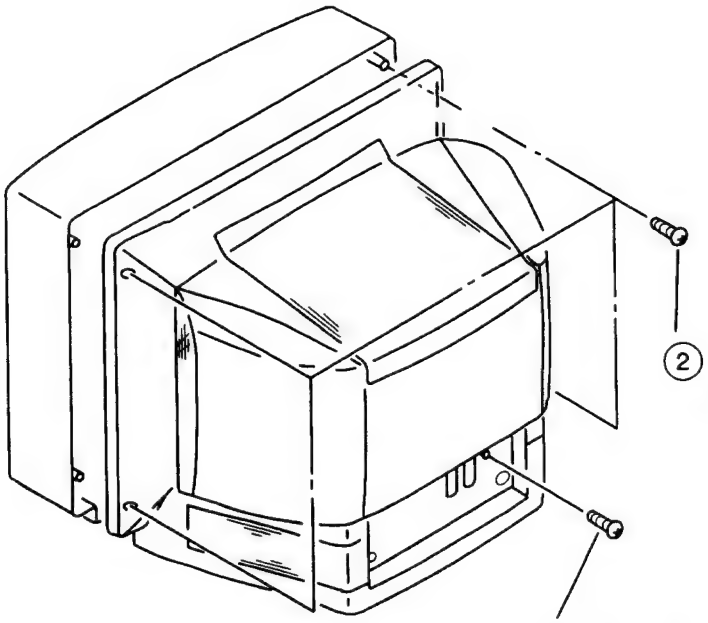
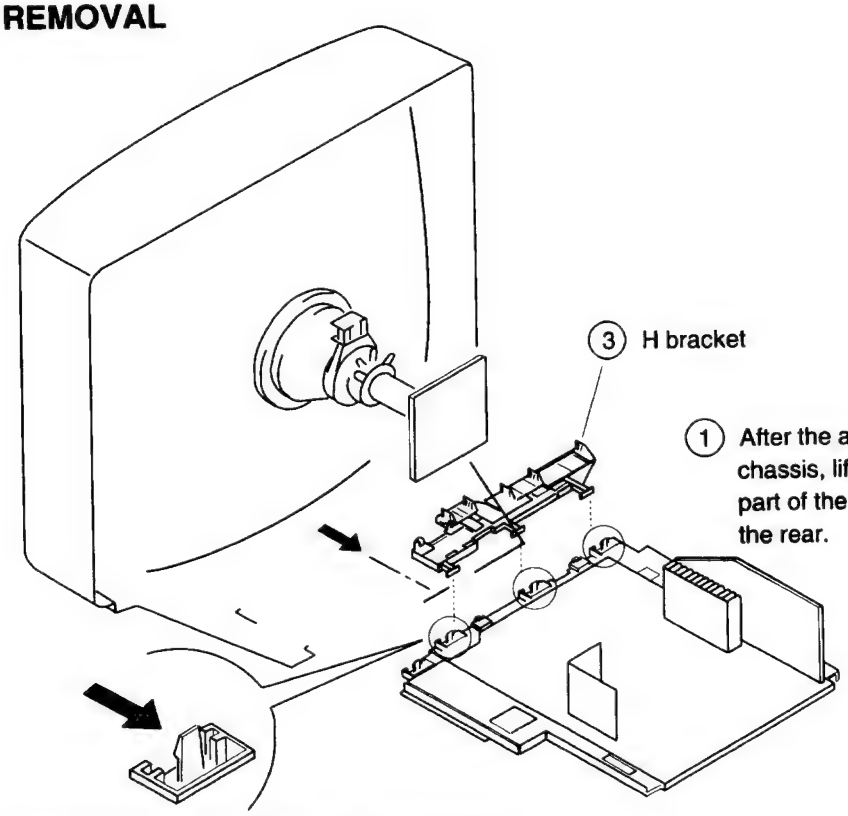
SECTION 2
DISASSEMBLY

2-1. REAR COVER REMOVAL

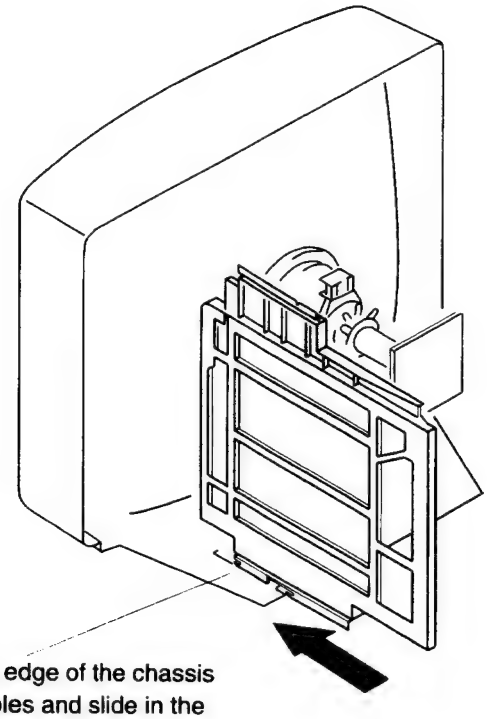


2-2. CHASSIS ASSY REMOVAL



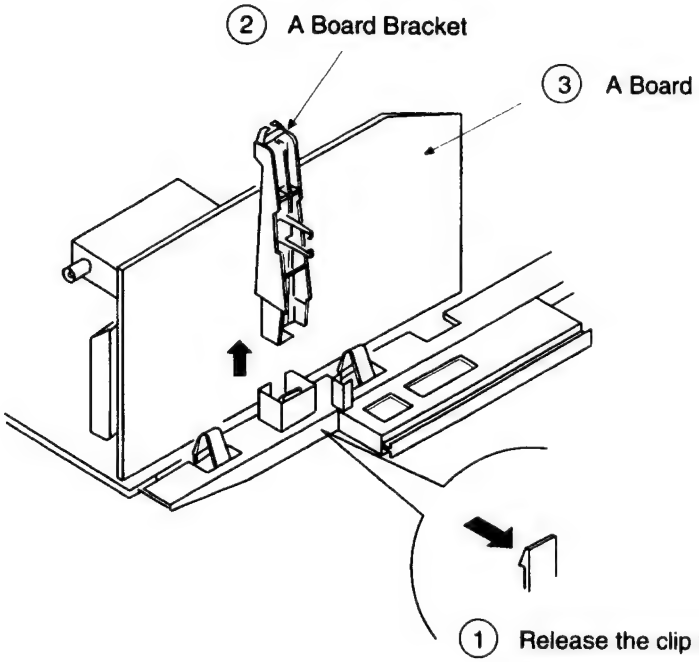
② Push the three claws of the main chassis in the direction of the arrow and remove the H bracket upwards.

2-3. SERVICE POSITION



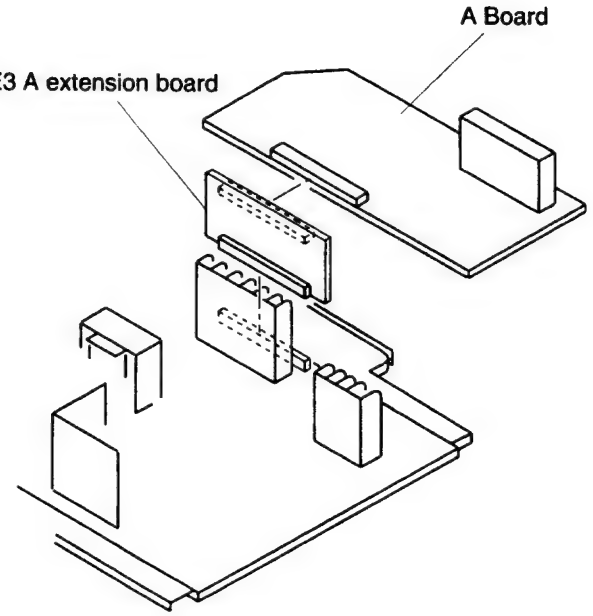
Locate the 2 slots on the edge of the chassis bracket in the locating holes and slide in the direction of the arrow

2-4. A BOARD REMOVAL

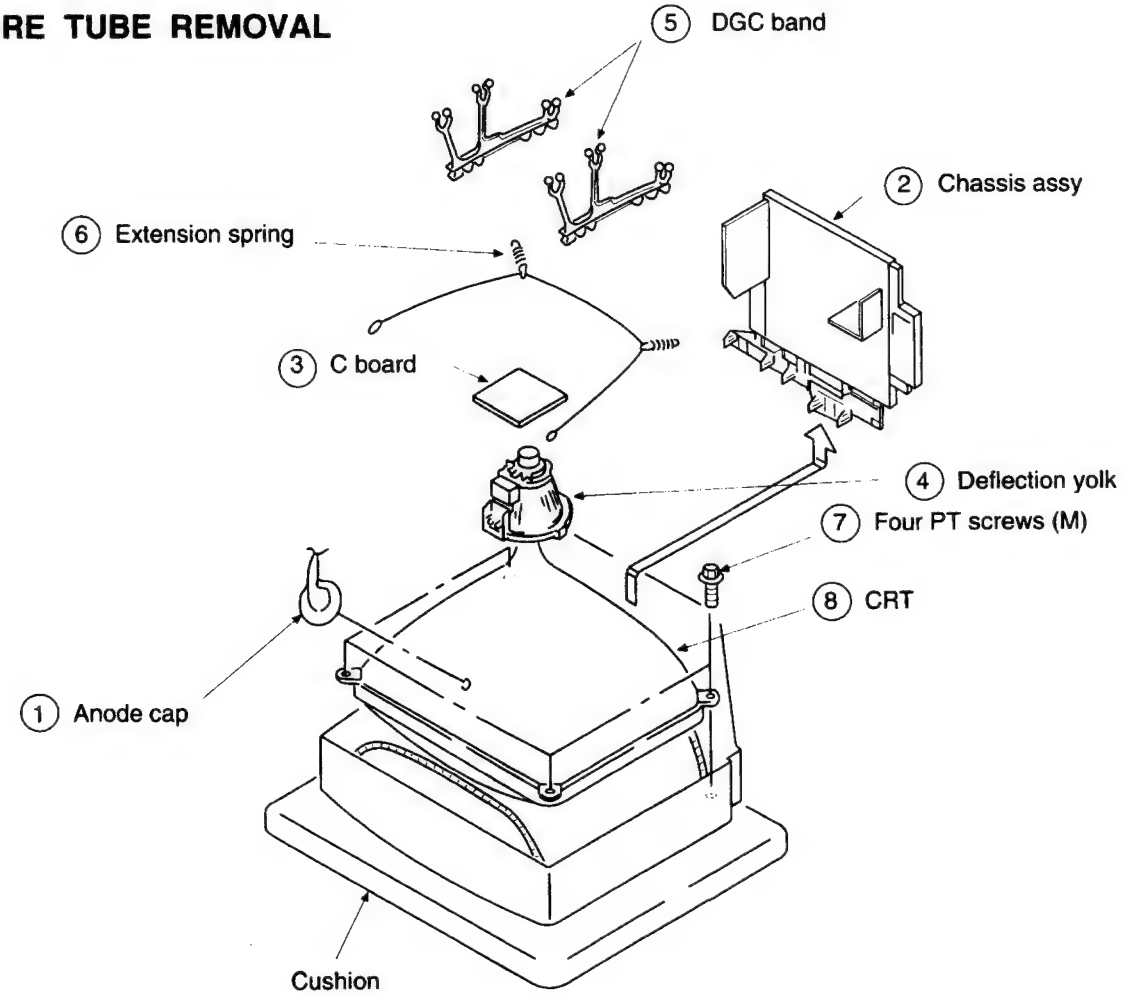


① Release the clip by pressing in the direction of the arrow, shown and lift out the A board bracket

2-5. EXTENSION BOARD



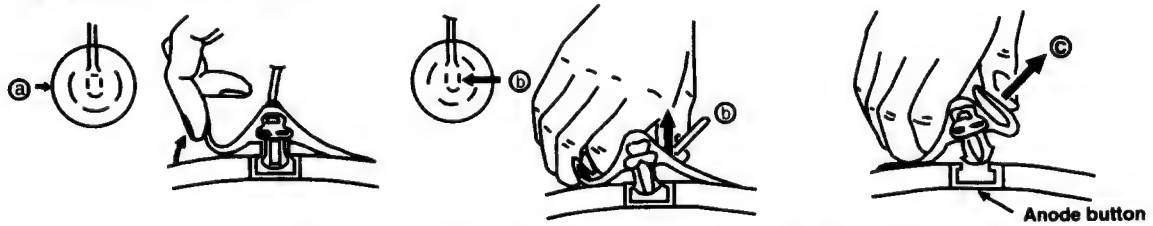
2-6. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

*** REMOVING PROCEDURES.**



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ

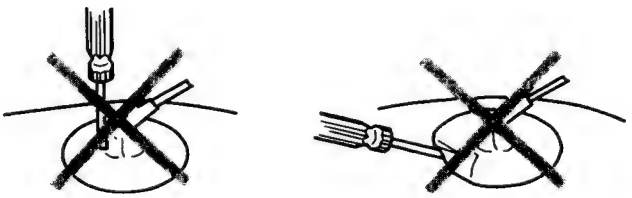
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ

• HOW TO HANDLE AN ANODE-CAP

(1) Don't damage the surface of anode-cap with sharp shaped material !

(2) Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built into the rubber.

(3) Don't turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or damage the rubber.



SECTION 3
SET - UP ADJUSTMENTS

● The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

● These adjustments should be performed with rated power supply voltage unless otherwise noted.

The controls and switch below should be set as follows unless otherwise noted :

◑ CONTRASTcontrol ..... 80%(or Normal by commander)

☼ BRIGHTNESS control 50%

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. Screen (G 2) and White Balance

Note: Test Equipment Required.

1. Color bar/Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter
5. Oscilloscope

Preparation:

● Set the side of the unit with the PICTUE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.

● Turn the power switch for the unit ON and erase the magnetic force using a degausser..

3-1. BEAM LANDING

Demagnetize with a degausser

1. Input a raster signal with the pattern generator.
   CONTRAST, BRIGHTNESS } normal
2. Turn the raster signal of the pattern generator to red.
3. Move the deflection yoke backward, and adjust with the purity control so that red is in the center and blue and green are at the sides evenly. (Fig.3-1 - 3-3)
4. Move the deflection yoke forward, and adjust so that the entire screen becomes red. (Fig.3-1)
5. Switch over the raster signal to blue and blue and confirm the condition.
6. When the position of the deflection yoke is determined,tighten it with a deflection yoke mounting screw.
7. When landing at the corner is not right, adjust by using the disk magnets. (Fig.3-4)

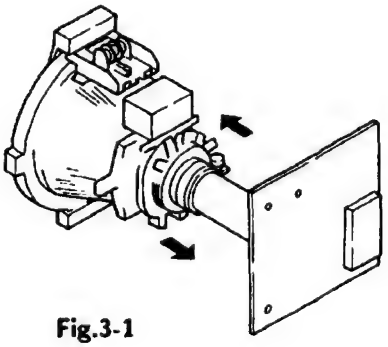


Fig.3-1

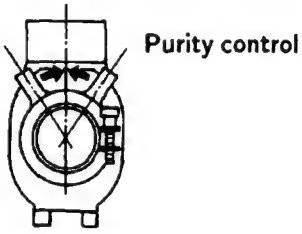


Fig.3-2

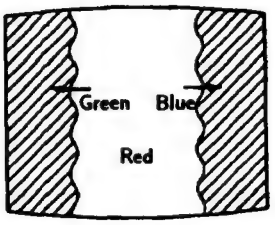


Fig.3-3

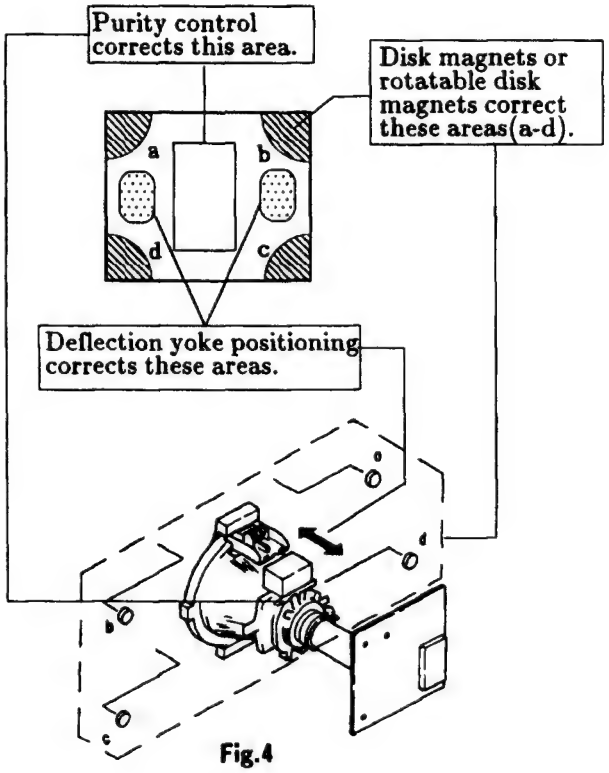


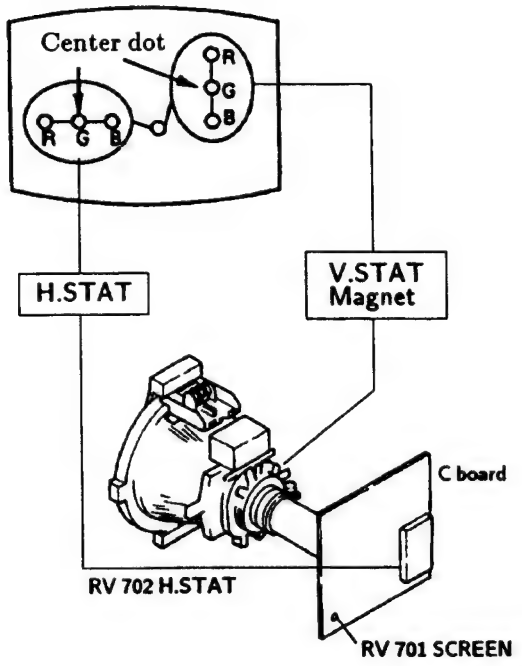
Fig.4

3-2. CONVERGENCE

Preparation:

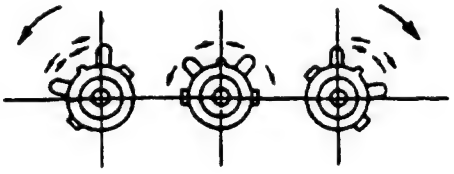
- Before starting, perform FOCUS, H.SIZE, and V. SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in the dot pattern.

(1) Horizontal and Vertical Static Convergence

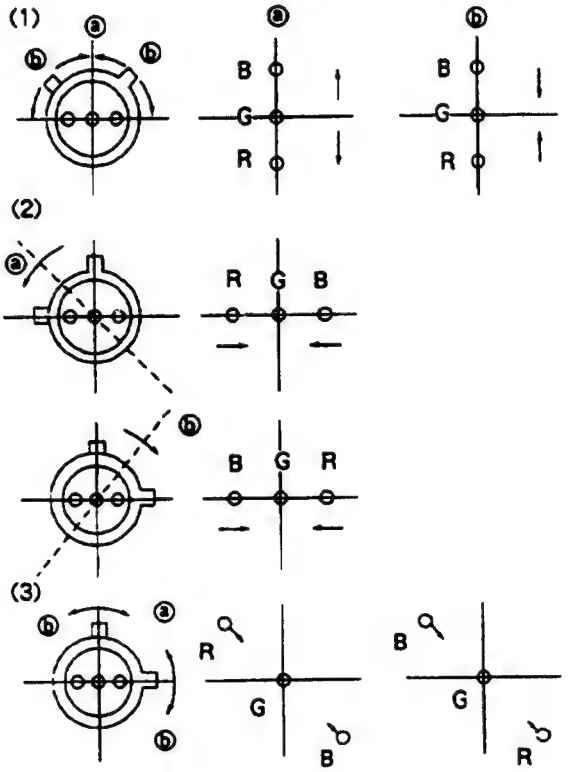


1. Adjust H.STAT VR to converge red, green and blue dots the in center of the screen.(Horizontal movement)
2. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)
3. If the red, green and blue dots do not converge on the center of screen with H.STAT VR, perform horizontal convergence adjustment using H.STAT VR and V.STAT magnet as shown below. (In this case, H.STAT VR and V.STAT magnet effect each other.)

- Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.



4.When the V.STAT magnet is moved in the direction of arrow ⓐ and ⓑ, red, green and blue dots move as shown below.

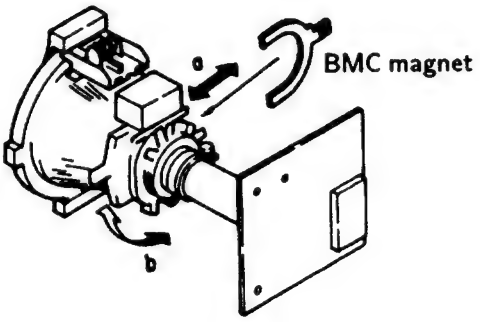


If the red and blue dot do not converge with green dots, perform following steps.

Move BMC magnet (a) to correct insufficient H.static convergence.

Rotate BMC magnet (b) to correct insufficient V.static convergence.

In either case, repeat Beam Landing Adjustment.

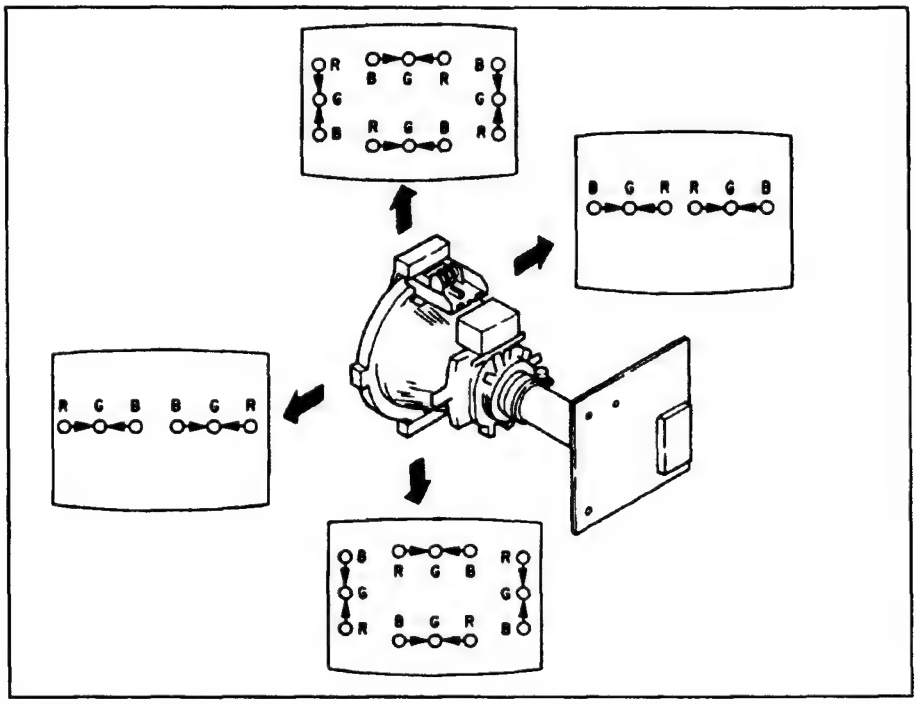


(2)Dynamic Convergence Adjustment

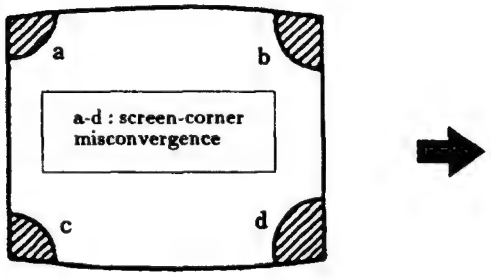
Preparation:

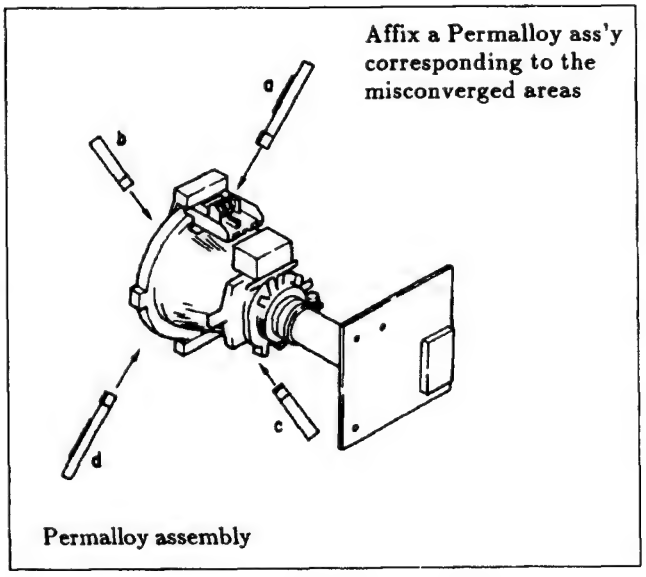
● Before starting perform Horizontal and Vertical static convergence Adjustment.

1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergenceas shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.



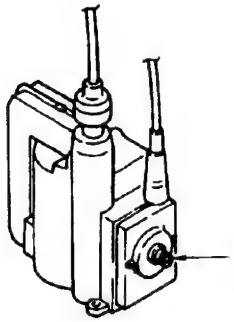
(3) Screen-corner Convergence





3-3. FOCUS

Adjust FOCUS so that the whole screen is in best focus.



3-4. WHITE BALANCE

Screen G2 Setting

1. Input the dot signal from the pattern generator.
2. Set the picture brightness control to its lowest level.
3. Apply 180V DC to the R,G, and B cathodes with an external power supply.
4. While watching the picture, adjust G 2 control RV 701 (Screen) to the point just before the return lines disappear.

White balance adjustment

1. Receive all-white signal.
2. Enter into service mode. (Refer to the section 4 "Electrical Adjustment" to how to enter service mode.)
3. Select CXA 1587 on menu.

09	SUB BRIGHT	ADJ.
10	SUB HUE	7
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.

4. Set picture to MAX.
5. Adjust G-DRIVE B-DRIVE with [↑], [↓] buttons so that the white balance becomes optimum.
6. Press [OK] button to write the data for each item.
7. Set picture to MIN.
8. Adjust G-AUTO CUT OFF, B-AUTO CUT OFF, R -MANUAL CUT OFF, G-MANUAL CUT OFF and B-MANUAL CUT OFF with [↑], [↓] buttons so that the white balance becomes optimum.
9. Press [OK] button to write the data for each item.

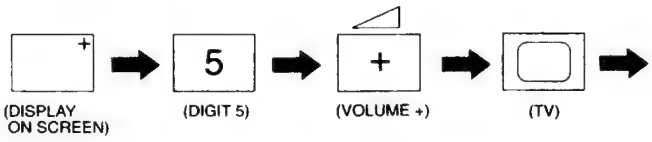
SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-833.

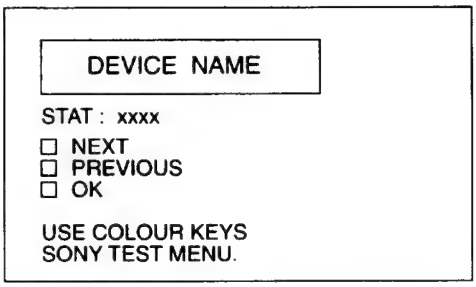
HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set and enter into standby mode.
2. Press the following sequence of buttons on the Remote Commander.

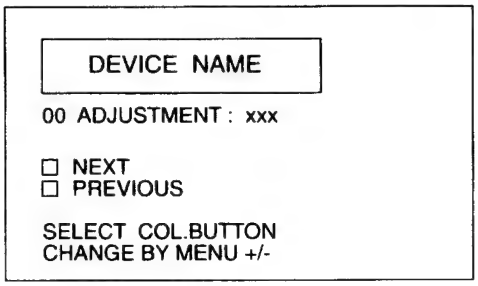


"TT " will appear in the top right corner of the screen. Other status information will also be displayed.

3. Press the MENU button on the Remote Commander to obtain the menu on the screen.



4. Press the Red (Next) and Green (Previous) buttons to select the device corresponding to the adjustment item from the table. Then press the White button (OK).



5. Press the Red (Next) or Green (previous) buttons to select the adjustment item. Then press the and buttons to change the data to comply with each standard.

6. Turn off the power to quit the service mode when adjustments are completed.

Initial Conditions for setup of TDA8366, TDA6612 and SAA7283. (Stereo Models Only)

TDA8366 1	INIT VALUE	TDA8366 2	INIT VALUE
Hue	31	Interlace	00
H Shift	Adj	Sync Mode	00
H Size	Adj	Col Dec	00
Pin Amp	Adj	Vert Div	00
Com Pin	Adj	Vid ID	00
Tilt	Adj	EHT Track	01
V.Linear	Adj	En V Grd	00
V.Size	Adj	Serv Blk	00
S.Corr	Adj	OVP Mode	00
V.Cent	Adj	Aspect R	00
HWB Red	Adj	Start Freq	00
HWB Green	Adj	Y/C Input	00
HWB Blue	Adj	PAL/NTSC	00
Peaking	8	Xtal PLL	00
Bright	32	Y Delay	07
Colour	32	RGB Blk	00
Picture	37	Noise Cor	00
AGC Set	00	Fast Blk	01
Srce Sel 1	00	AFC Wind	00
Srce Sel 2	00	IF Sensty	00
Time Con	03	Mod Std	00
Xtal Ind	03	Vid Mute	01
FF Freq	02		

TDA6612	INIT VALUE	TDA6612	INIT VALUE
MPX Per	00	Mute 2	01
Quasi St	00	C1/2LS	00
Bass Exp	00	C1/2KH	00
H Pulse	00	Mono	01
Matrix St	00	Scart	00
Bypass	00	Scart D	00
Vol L Sp	07	AM	00
Vol R Sp	07	SAA7283	INIT VALUE
Vol HP	00	Mon M1/M2	01
Pll Sync	00	DM Select	01
Mute 3	01	SSWIT 123	07
Treble	08	Port 2	00
Bass	09	Mute Def	00
X Talk Adj	Adj	AMDIS	00
Mute 1	00	E Max	80
		E Min	01

4-2. TEST MODE 2 :

Is available by pressing Test button twice, OSD 'TT ' appears. The functions described below are available by pressing the two numbers. To release the Test Mode 2, press 0 twice, or switch the TV into Stand-by Mode.

00	switch Test Mode 2 off
01	picture maximum
02	picture minimum
03	Volume 35%
04	Volume 50%
05	Volume 65%
06	Volume 80%
07	Ageing Condition (Volume min., Picture max., Brightness max.
08	Shipping Condition (Analog Values are RESET due to factory setting, Prog 1 is selected, TT Mode is switched off)
09	"Menu" Flag request
10	Tenth entry is deleted
11	dummy
12	dummy
13	dummy
14	Forced AV 16:9 detection on/off
15	Read factory setting from NVM Reads Volume, Balance, Treble, Bass, Brightness, Contrast, Hue, Sharpness, Colour values from ROM to the actual used values (Last Power Memory)
16	Save actual used values as RESET values Memorize actual used values Balance, Treble, Bass, Hue, Sharpness at RESET position in NVM.
17	Preset Label for AV Sources
18	RGB Priority on/off
19	Clear all preset labels
20	Tenth entry is deleted
21	Sub Contrast
22	Sub Colour
23	Sub Brightness
24	Set destination = U RGB Priority = Off
25	Set destination = D RGB Priority = Off
26	Set destination = B RGB Priority = On
27	Set destination = K RGB Priority = Off
28	Set destination = L RGB Priority = Off
29	Set destination = E RGB Priority = Off
30	Tenth entry is deleted
31	Set Destination = A RGB Priority = On
32	dummy
33	Auto AGC
34	N/S Pin Adjust
35	Manual AGC Adjust
36	dummy
37	dummy
38	dummy
39	dummy
40	Tenth entry is deleted
41	Re-initialise NVM
42	Production use only
43	Initialise Geom Settings
44	Initialise all favorite pages = 100
45	Channel locks = off
46	IR Channel Pressetting Mode The channel pressetting can be done by a Special IR Transmitter (Ver 2 and above software only)
47	dummy
48	Set NVM testbyte to 44h
49	Erase the NVM Testbyte (this byte detects already stored NVM's) After selecting this function, switch TV Off and On -> the NVM will be preset by µ-Controller.

In Test Mode the Menu display is switchable by the Speaker-Off button.

Note : For Test Modes 41 - 49 it is necessary to ensure that the TV is set to Prog 59.

SUB BRIGHTNESS ADJUSTMENT

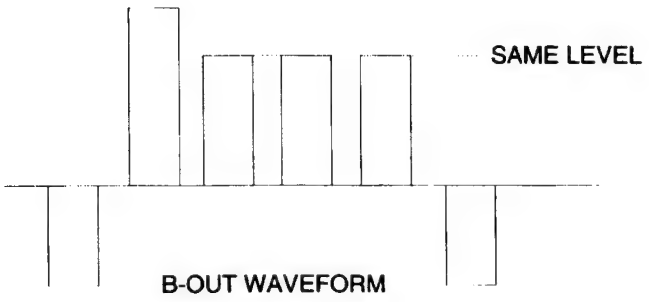
1. Input a Phillips pattern.
2. Enter into service mode and press 23.
3. Adjust data so that 0-IRE of grey scale and CUT-OFF 20-IRE are only slightly visible on screen.

SUB CONTRAST ADJUSTMENT

1. Input a video that contains a small 100% area on a Black Background.
2. Enter into service mode and press 01 to have PIC max followed by 21.
3. Connect oscilloscope to pin (1) of CN703 (R OUT) and adjust HWB Red data of TDA8366 1 to obtain 2.3Vp-p.

SUB COLOR ADJUSTMENT

1. Input a PAL color bar signal.
2. Connect an oscilloscope to pin (3) of CN703 (B OUT) on the C board.
3. Enter into service mode and press 22.
4. Adjust data so that the right sides of the waveform are set to the same level.



STEREO SEPARATION ADJUSTMENT

1. Input a 1KHz stereo signal to the L-ch and a 400Hz stereo signal to the R-ch.
2. Enter into service mode and select the "Test Menu" to be TDA6612.
3. Select the Stereo Xtalk Adjustment Menu, by using the Red (Next) and Green (Previous) buttons.
4. Monitor the Scart 1 L-channel output and adjust the data so that the R-channel sound is not detected in the L-channel.

I.F. COIL ADJUSTMENT (T101) - B/G, D/K, I AND L STANDARD FOR CONTINENTAL MODELS.

1. Apply a 38.9MHz signal at 100dBuV to the input of SWF101.
2. Receive a channel so that the I.C. is selected for negative modulation.
3. Measure the voltage at the AFT test point and adjust (T101) to obtain 2.4V +/- 0.2V.

I.F. COIL ADJUSTMENT (T101) - I, STANDARD FOR U.K. MODELS.

1. Apply a 39.5MHz signal at 100dBuV to the input of SWF101.
2. Receive a channel so that the I.C. is selected for negative modulation.
3. Measure the voltage at the AFT test point and adjust (T101) to obtain 2.4V +/- 0.2V.

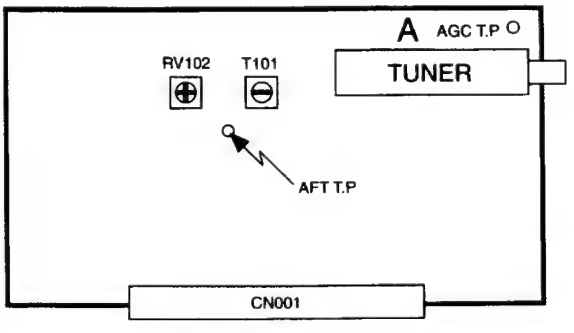
L, BAND 1 ADJUSTMENT (RV102) - L, STANDARD FOR FRENCH MODELS.

1. Apply a 33.95MHz signal at 100dBuV to the input of SWF101.
2. Receive a channel so that the I.C. is selected for positive modulation and system L band 1.
3. Measure the voltage at the AFT test point and adjust (RV102) to obtain 2.4V +/- 0.2V.

Note : Only adjust RV102 after T101 has been correctly adjusted.

AGC ADJUSTMENT

1. Receive an off- air signal.
2. Enter the service mode, ("Test" "Test") and 35.
3. Adjust the data so that there is no snow or cross - modulation visible on the screen.
4. Change the receiving off-air channel, and confirm the above status.



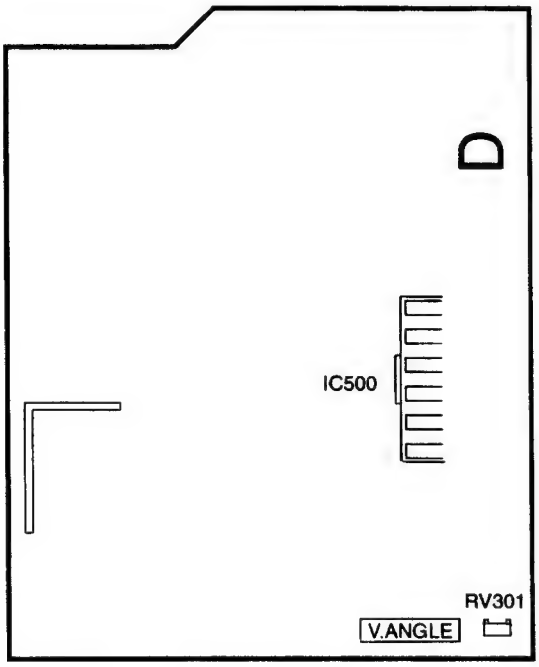
- A Board component side -

DEFLECTION SYSTEM ADJUSTMENT

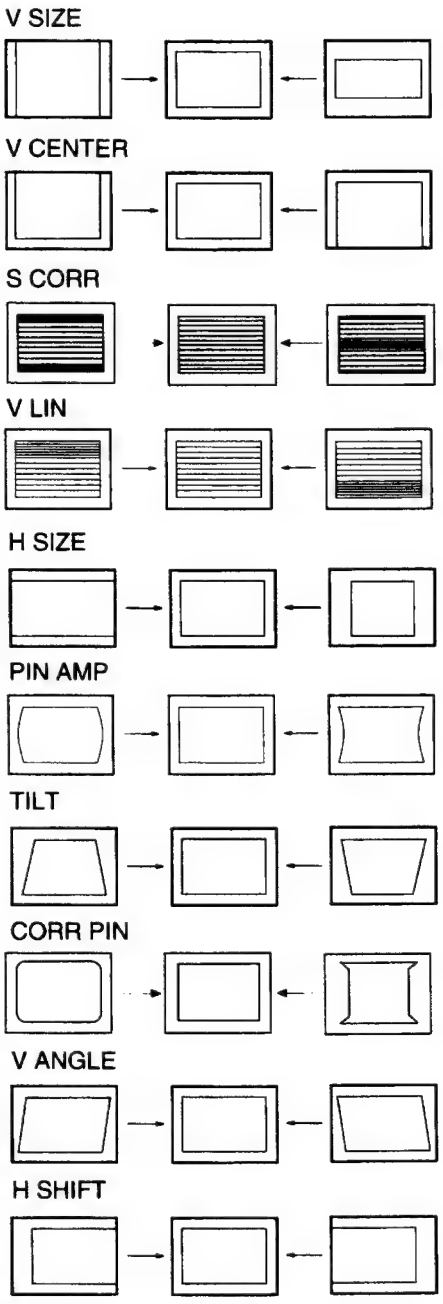
1. Enter into service mode.
2. Select and adjust each item in order to obtain the optimum image.

Item No	Adjustment item.	Data Amount
03	H SHIFT	ADJ.
04	H SIZE	ADJ.
05	PIN AMP	ADJ.
06	CORR PIN	ADJ.
07	TILT	ADJ.
08	V LINEAR	ADJ.
09	V SIZE	ADJ.
0A	S CORR	ADJ.
0B	V CENTER	ADJ.

Note : V ANGLE is adjusted by a Variable Resistor on the 'D' Board (RV301)



- D Board Component Side -



4-3. BE3 SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-3 chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failiure to respond to IIC. In the event of one of these situations arrising the software will first try to release the bus if busy (Failiure to do so will report with continous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the led (Series of flashes which must be counted) See Table 1., on fatal errors are reported with this method.

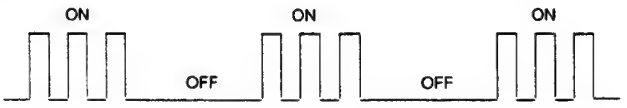
If a fatal error is found the set will simply stay in whichever state it was when the error occured, but if a non fatal error occurs the set will try to continue operation.

Table 1

Device	LED Error Count	Fatal Error
NVM	2 .. 9	√
Teletext	10	
Jungle	11	√
Video_sw	12	
Tuner	13	√
Nicam	14	
Audio_cont	15	√

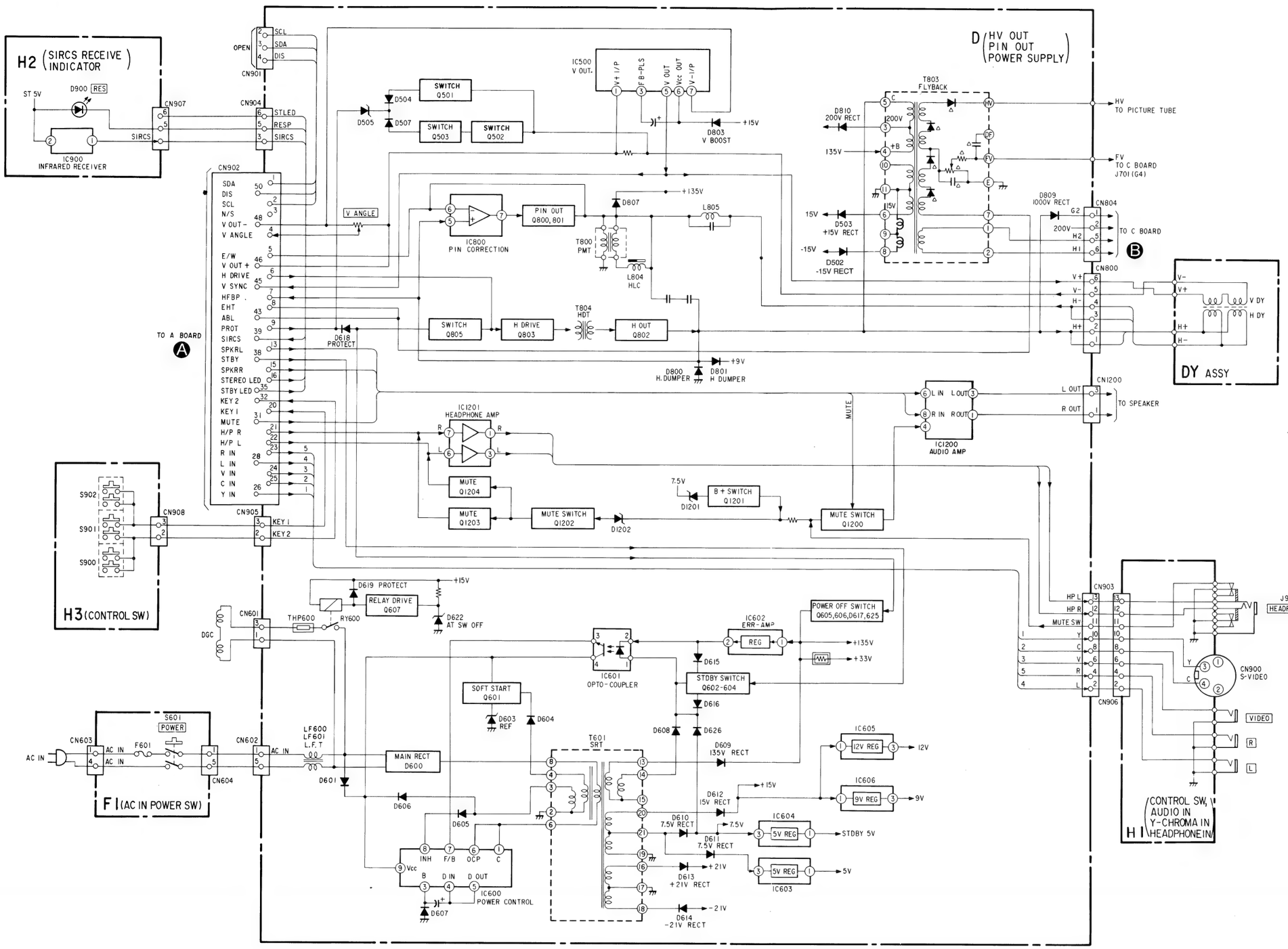
Flash Timing Example : e.g. error number 3.

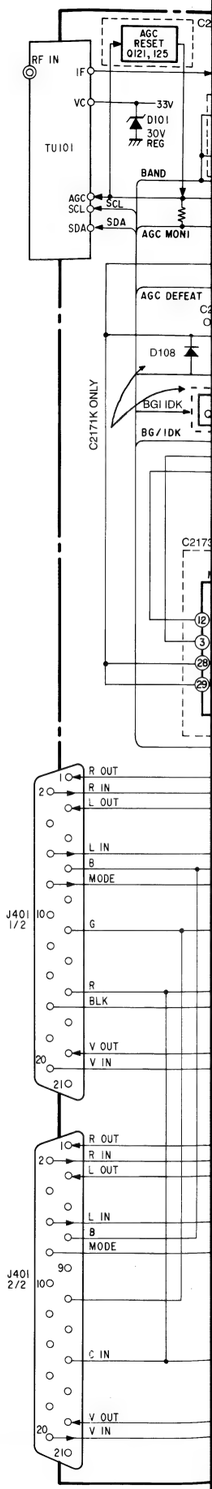
Stby LED

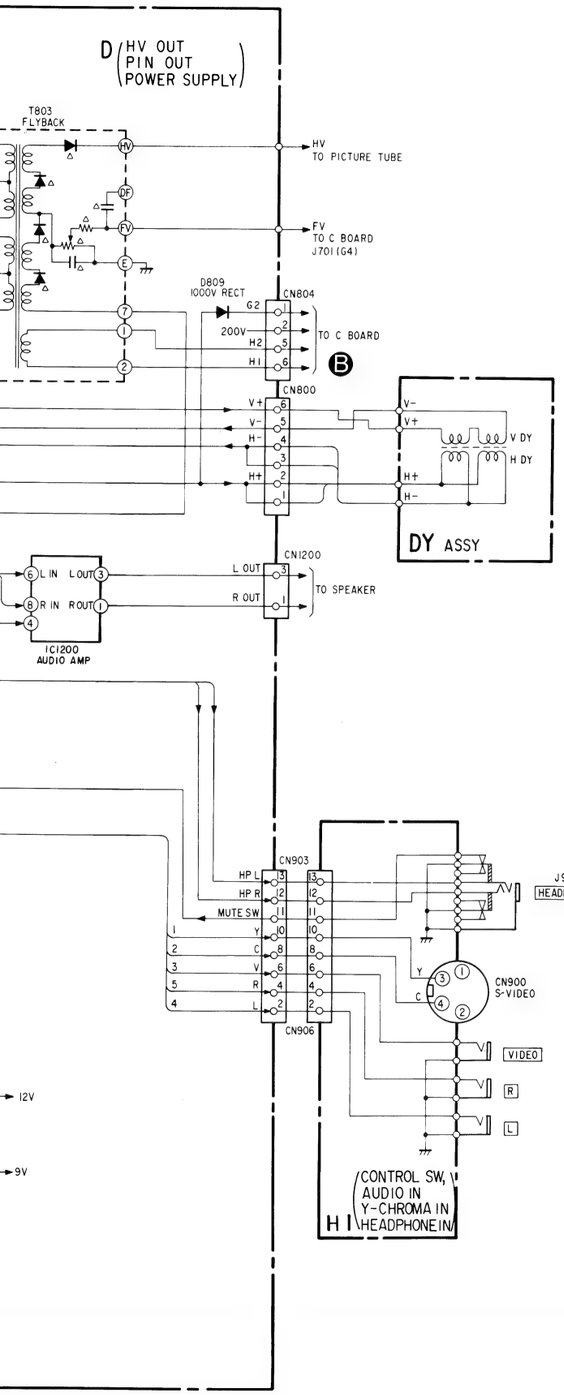


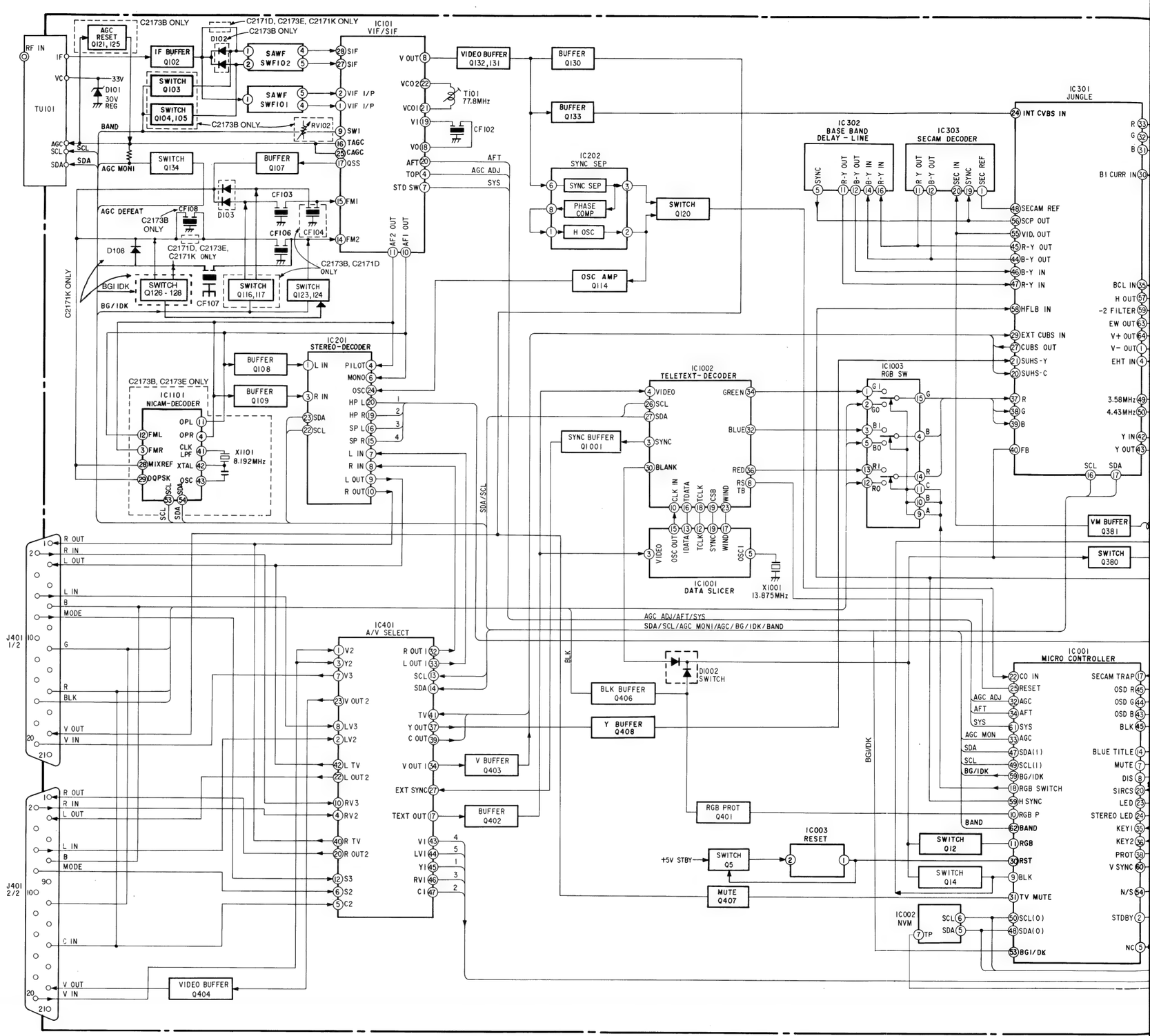
SECTION 5
DIAGRAMS

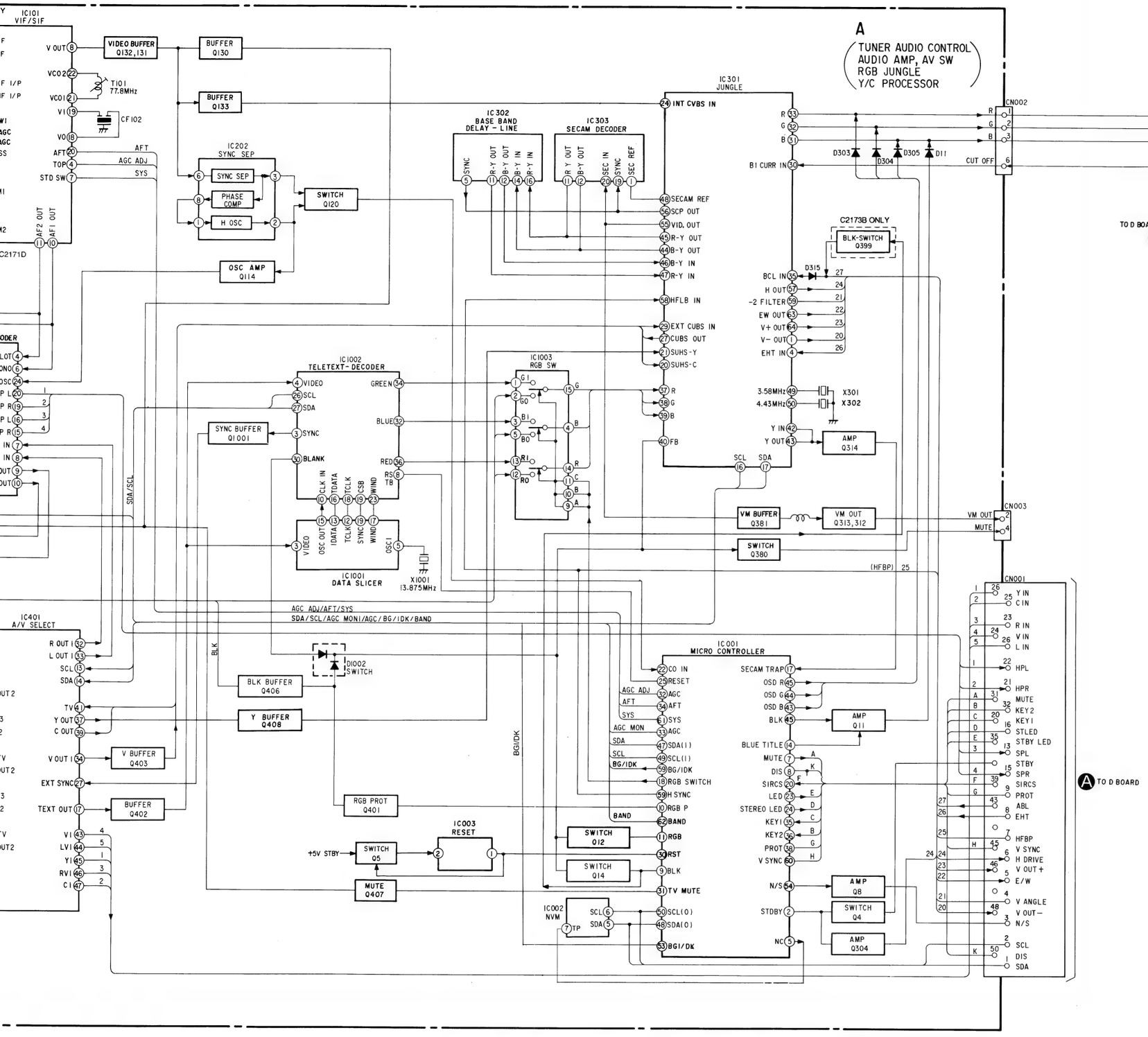
5-1. BLOCK DIAGRAM



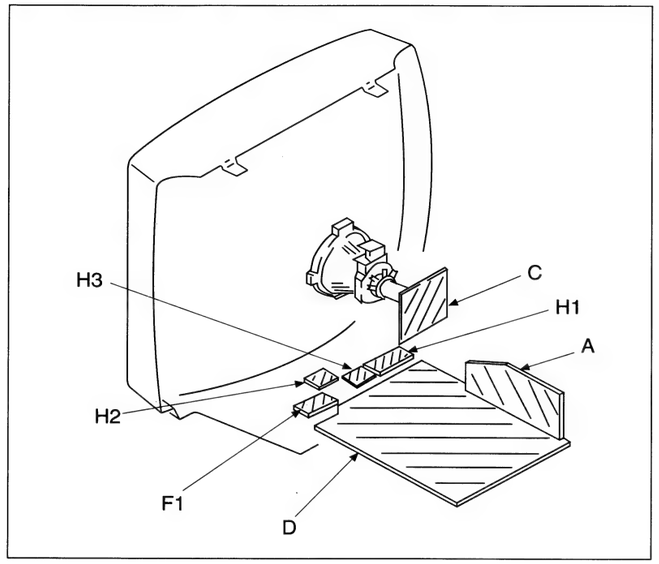



D (HV OUT PIN OUT POWER SUPPLY)
T803 FLYBACK
HV TO PICTURE TUBE
FV TO C BOARD J701(G4)
D809 1000V RECT
CN804
TO C BOARD
B
CN800
V DY
H DY
DY ASSY
CN1200
L OUT
R OUT
TO SPEAKER
IC1200 AUDIO AMP
CN903
HP L
HP R
MUTE SW
J900 HEADPHONES
CN900 S-VIDEO
CN906
VIDEO
R
L
12V
9V
CONTROL SW, AUDIO IN Y-CHROMA IN HEADPHONE IN


RF IN
TU101
AGC RESET Q121, 125
IF BUFFER Q102
SWITCH Q103
SWITCH Q104, 105
SWITCH Q134
BUFFER Q107
C2173B ONLY
C2171D, C2173E, C2171K ONLY
IC101 VIF/SIF
SAWF SWF102
SAWF SWF101
RV102
CF103
CF108
CF106
CF104
D102
D103
D108
AGC DEFEAT
BG/IDK
SWITCH Q126 - 128
CF107
SWITCH Q116, 117
SWITCH Q123, 124
C2171K ONLY
C2173B, C2171D ONLY
VIDEO BUFFER Q132, 131
BUFFER Q130
BUFFER Q133
T101 77.8MHz
CF102
IC202 SYNC SEP
SYNC SEP
PHASE COMP
H OSC
SWITCH Q120
OSC AMP Q114
IC201 STEREO-DECODER
BUFFER Q108
BUFFER Q109
C2173B, C2173E ONLY
IC1101 NICAM-DECODER
X1101 8.192MHz
SDA/SCL
IC1002 TELETEXT-DECODER
SYNC BUFFER Q1001
IC1003 RGB SW
IC1001 DATA SLICER
X1001 13.875MHz
IC301 JUNGLE
IC302 BASE BAND DELAY - LINE
IC303 SECAM DECODER
VM BUFFER Q381
SWITCH Q380
J401 1/2
J401 2/2
IC401 A/V SELECT
AGC ADJ/AFT/SYS
SDA/SCL/AGC MONI/AGC/BG/IDK/BAND
BLK
DI002 SWITCH
BLK BUFFER Q406
Y BUFFER Q408
V BUFFER Q403
BUFFER Q402
RGB PROT Q401
VIDEO BUFFER Q404
IC003 RESET
+5V STBY
SWITCH Q5
MUTE Q407
SWITCH Q12
SWITCH Q14
IC001 MICRO CONTROLLER
IC002 NVM
BAND
BGI/DK


A
(TUNER AUDIO CONTROL
AUDIO AMP, AV SW
RGB JUNGLE
Y/C PROCESSOR
IC101
VIF/SIF
V OUT 8
VIDEO BUFFER Q132,131
BUFFER Q130
BUFFER Q133
VCO2 22
VCO1 21
T101 77.8MHz
VI 19
CF102
VO 18
AFT 20
TOP 4
STD SW 7
AGC ADJ
SYS
IC202
SYNC SEP
SYNC SEP
PHASE COMP
H OSC
SWITCH Q120
OSC AMP Q114
AF2 OUT
AF1 OUT
IC2171D
IC301
JUNGLE
IC302
BASE BAND DELAY - LINE
IC303
SECAM DECODER
INT CVBS IN
SECAM REF
SCP OUT
VID. OUT
R-Y OUT
B-Y OUT
B-Y IN
R-Y IN
HFLB IN
EXT CUBS IN
CUBS OUT
SUHS-Y
SUHS-C
R
G
B
FB
B1 CURR IN
D303
D304
D305
D11
CUT OFF
CN002
C2173B ONLY
BLK-SWITCH Q399
BCL IN
H OUT
-2 FILTER
EW OUT
V+ OUT
V- OUT
EHT IN
D315
3.58MHz
4.43MHz
X301
X302
Y IN
Y OUT
AMP Q314
SCL
SDA
IC1002
TELETEXT-DECODER
VIDEO
SCL
SDA
SYNC
BLANK
GREEN
BLUE
RED
RS TB
CLK IN
TDATA
TCLK
CSB
WIND
SYNC BUFFER Q1001
IC1003
RGB SW
IC1001
DATA SLICER
X1001
13.875MHz
OSC I
OSC O
VM BUFFER Q381
VM OUT Q313,312
SWITCH Q380
VM OUT
MUTE
CN003
(HFBP) 25
CN001
CN703
R BKG Q702
G BKG Q705
B BKG Q708
R OUT Q703 704
G OUT Q706,707
B OUT Q709,710
V901
PICTURE TUBE
H RCV G2 G4 HV
TO D BOARD
B
CN701
H1
H2
D711
PROTECT
RV702
H STAT
RV701
SCRREN
G2(1000V)
RCV
G2
FV
C (RGB OUT)
TO D BOARD
T803 (FBT)
IC401
A/V SELECT
R OUT I 32
L OUT I 33
SCL 13
SDA 14
TV 41
Y OUT 37
C OUT 39
V OUT I 34
V BUFFER Q403
EXT SYNC 27
TEXT OUT 17
BUFFER Q402
VI 43
LVI 44
YI 45
RVI 46
CI 47
SDA/SCL
AGC ADJ/AFT/SYS
SDA/SCL/AGC MONI/AGC/BG/IDK/BAND
BLK
D1002
SWITCH
BLK BUFFER Q406
Y BUFFER Q408
RGB PROT Q401
IC003
RESET
+5V STBY
SWITCH Q5
MUTE Q407
IC001
MICRO CONTROLLER
CO IN
RESET
AGC ADJ
AFT
SYS
AGC MON
AGC
SDA
SDA(I)
SCL
SCL(I)
BG/IDK
RGB SWITCH
H SYNC
RGB P
BAND
RGB
RST
BLK
TV MUTE
SCL(O)
SDA(O)
BGI/DK
BGI/DK
SWITCH Q12
SWITCH Q14
IC002
NVM
SECAM TRAP
OSD R
OSD G
OSD B
BLK
AMP Q11
BLUE TITLE
MUTE
DIS
SIRCS
LED
STEREO LED
KEY1
KEY2
PROT
V SYNC
N/S
AMP Q8
STDBY
SWITCH Q4
NC
AMP Q304
Y IN
C IN
R IN
V IN
L IN
HPL
HPR
MUTE
KEY2
KEY1
STLED
STBY LED
SPL
STBY
SPR
SIRCS
PROT
ABL
EHT
HFBP
V SYNC
H DRIVE
V OUT+
E/W
V ANGLE
V OUT−
N/S
SCL
DIS
SDA
A TO D BOARD

5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm
Rating electrical power ¼ W

- : nonflammable resistor.
- △ : internal component.
- ▭ : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth - ground.
- ⏚ : earth - chassis.
- # : no mounted.

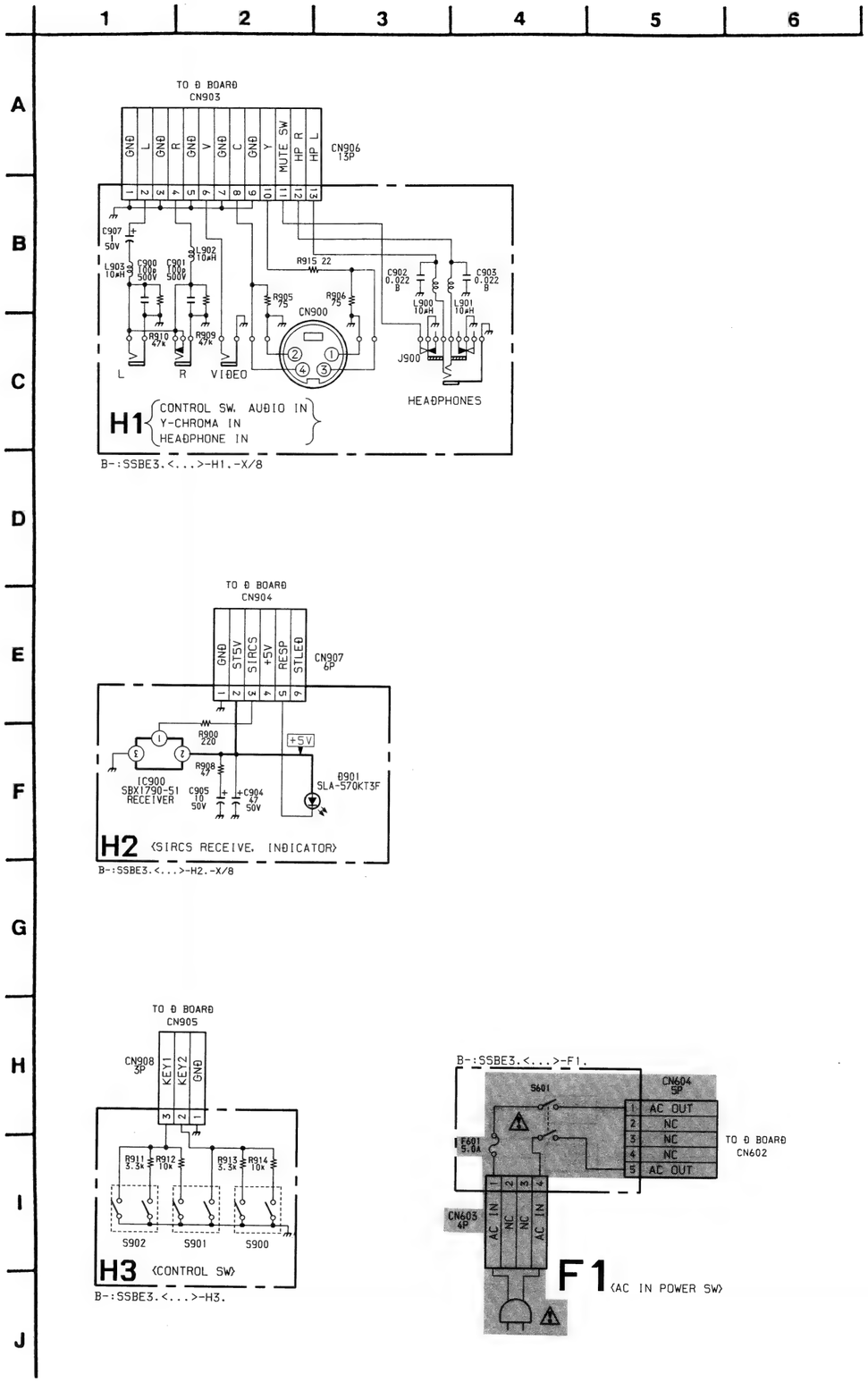
Note : The components identified by shading and marked ⚠ are critical for safety. Replace only with the part number specified.

Note : Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ※	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

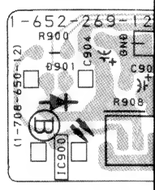
- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- ——— : B+ bus.
- ⟿ : signal path. (RF)



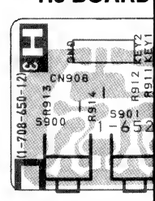
H1 [CON
[Y-CH

— H1 BOARD —

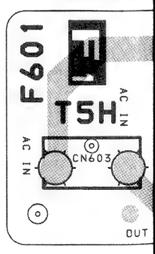
— H2 BOARD —

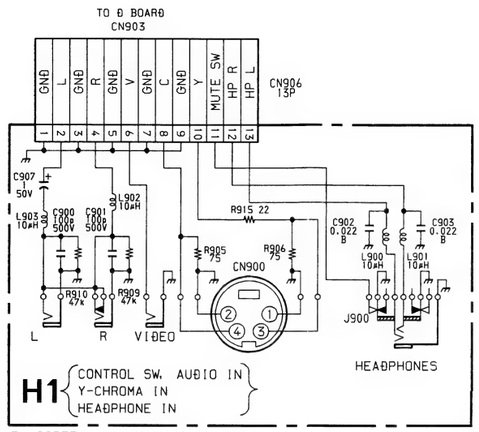


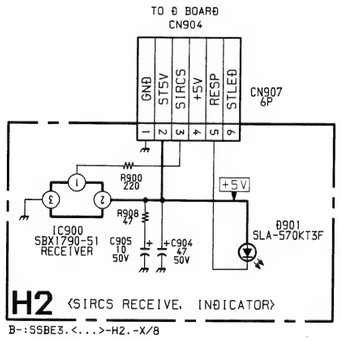
— H3 BOARD —

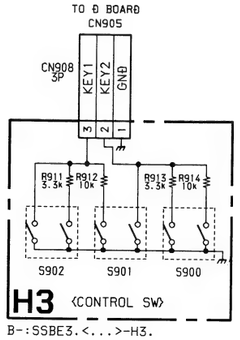


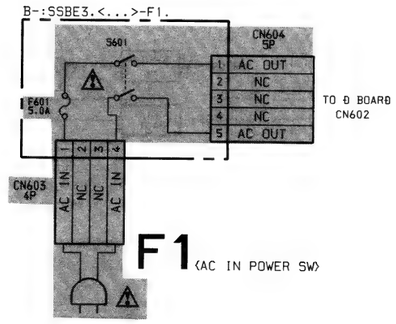
— F1 BOARD —





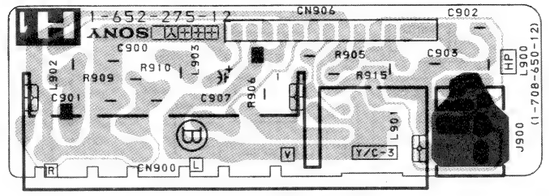




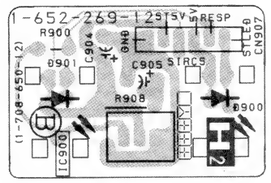


H1 [CONTROL SW, AUDIO IN / Y-CHROMA IN, HEADPHONE IN] **H2** [SIRCS RECEIVE INDICATOR] **H3** [CONTROL SW] **F1** [AC IN POWER SW] **D** [HV OUT / PIN OUT / POWER SUPPLY]

— H1 BOARD —

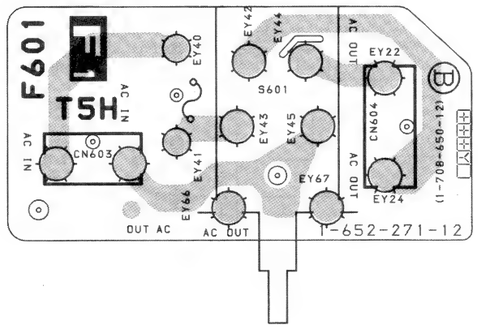


— H2 BOARD —

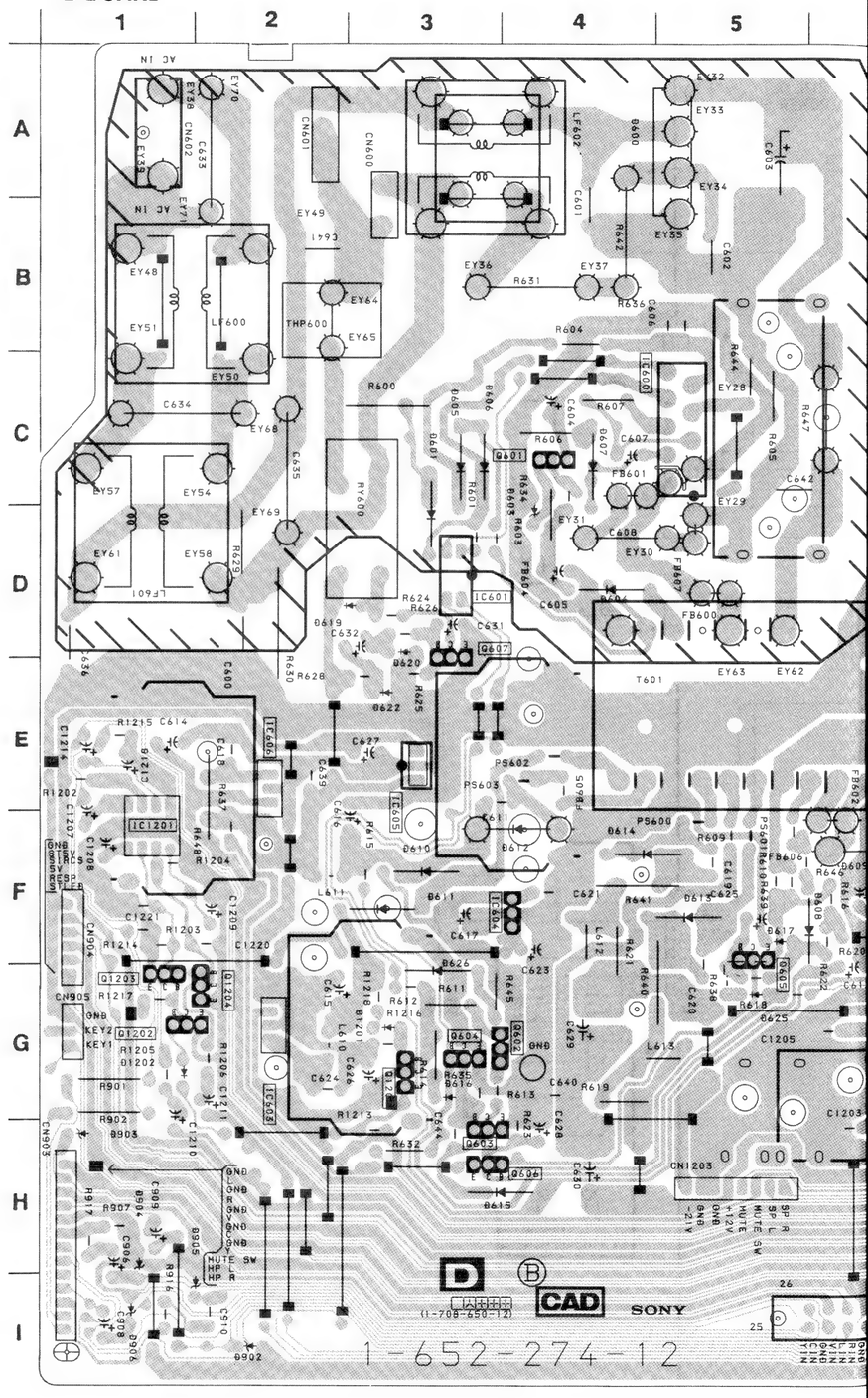


— H3 BOARD —

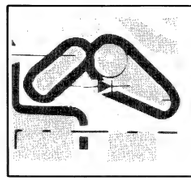
— F1 BOARD —



— D BOARD —

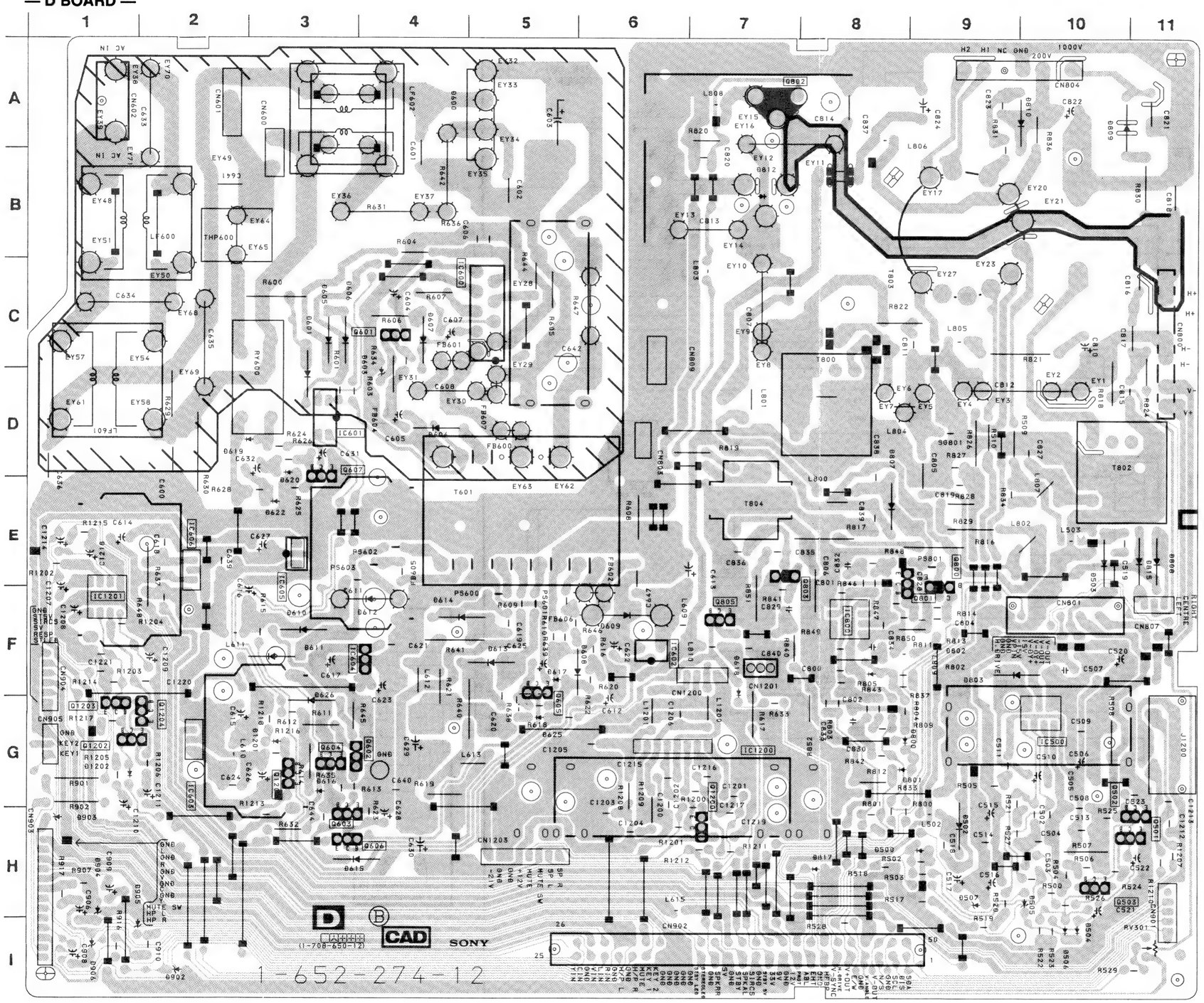


H2 [SIRCS RECEIVE INDICATOR] **H3** [CONTROL SW] **F1** [AC IN POWER SW] **D** [HV OUT PIN OUT POWER SUPPLY]



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

— D BOARD —



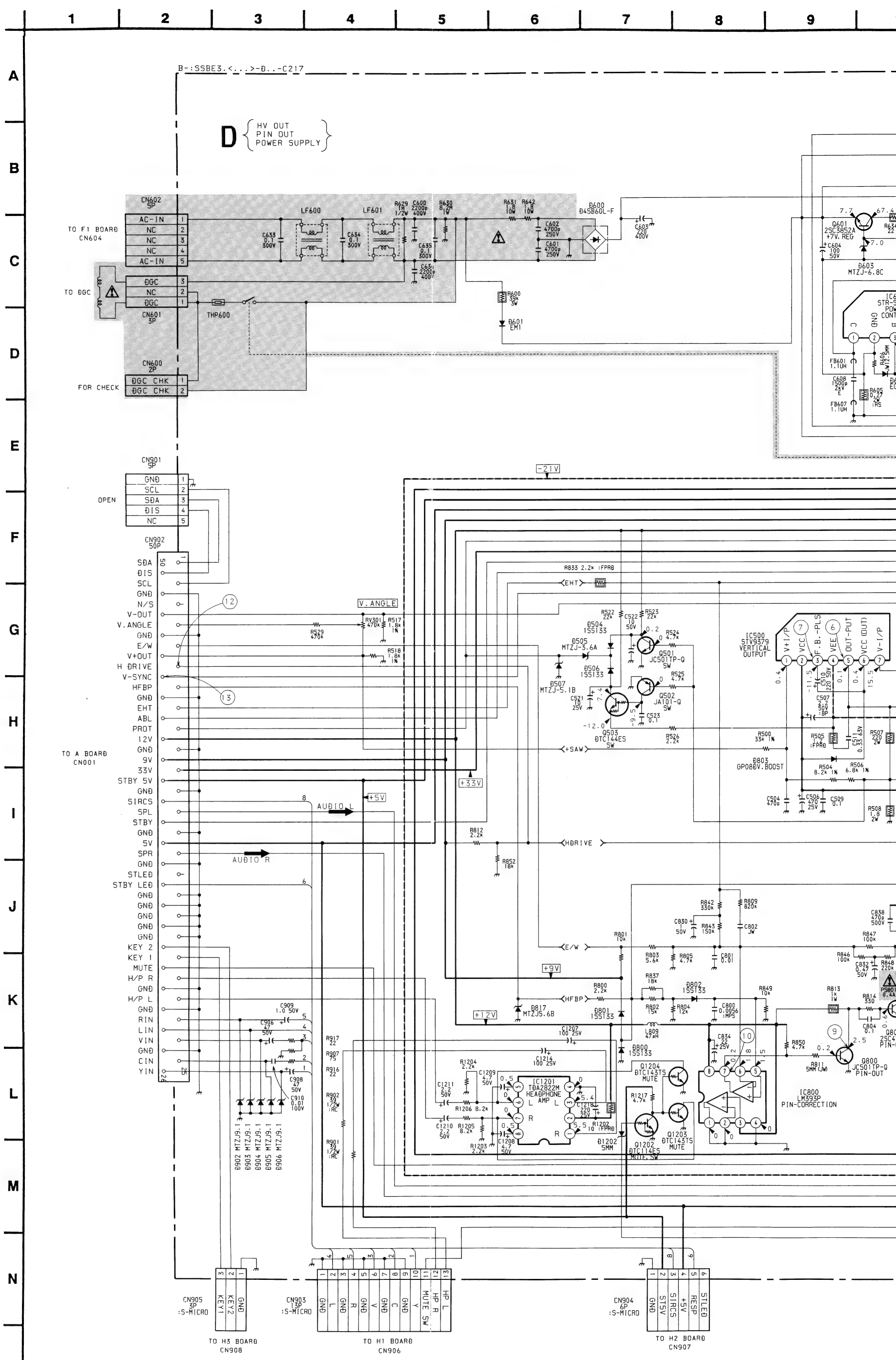
D BOARD

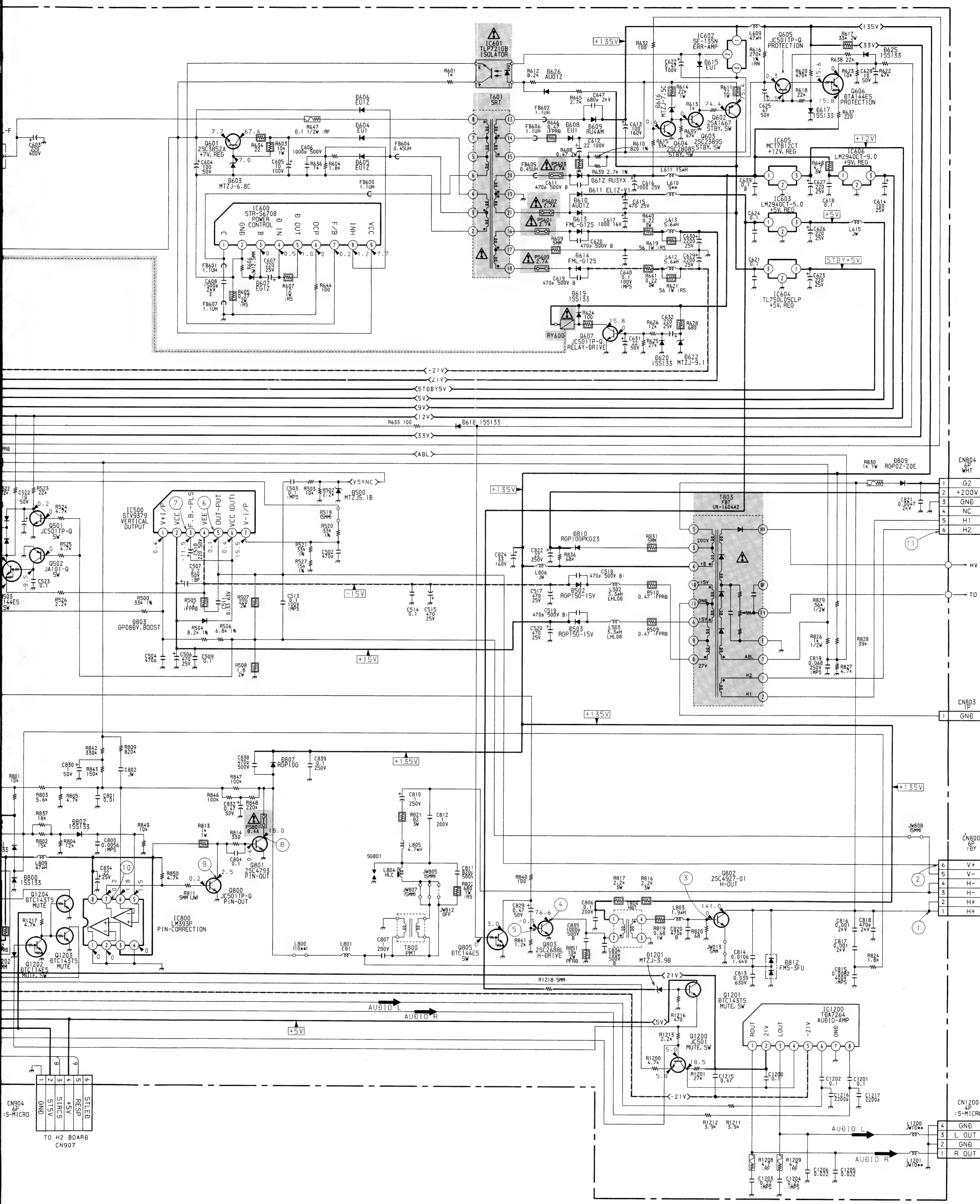
IC	
IC500	G-10
IC600	C-5
IC601	D-3
IC602	F-6
IC603	G-2
IC604	F-4
IC605	E-3
IC606	E-2
IC800	F-8
IC1200	G-7
IC1201	F-1

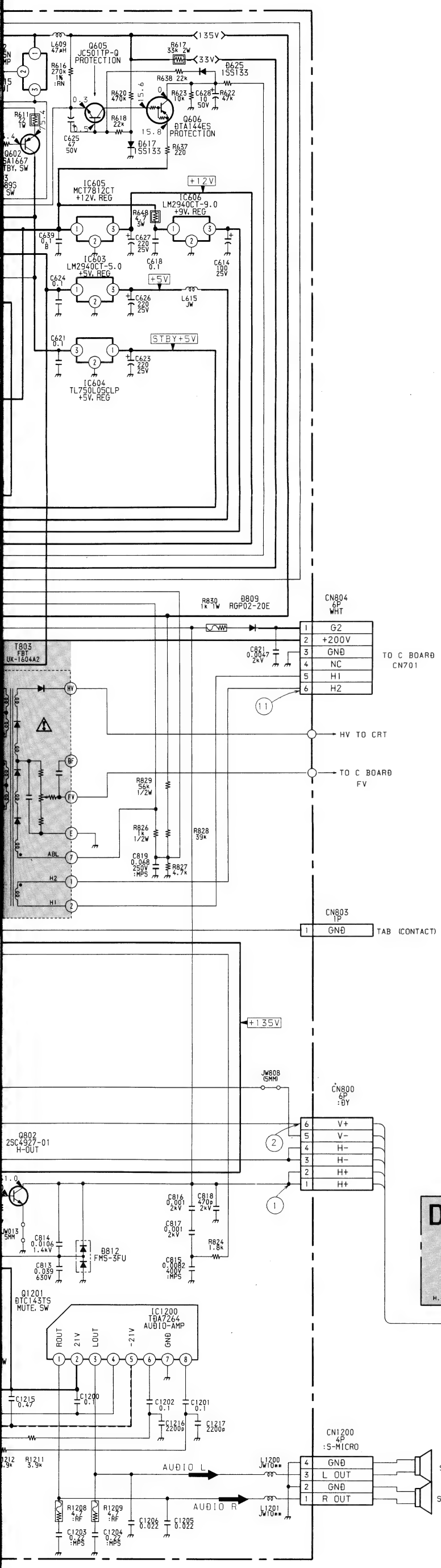
TRANSISTOR	
Q501	H-11
Q502	G-11
Q503	H-11
Q601	C-4
Q602	G-4
Q603	H-3
Q604	G-3
Q605	G-5
Q606	H-4
Q607	D-3
Q800	E-9
Q801	F-9
Q802	A-7
Q803	F-8
Q805	F-7
Q1200	H-7
Q1201	G-3
Q1202	G-1
Q1203	G-1
Q1204	G-2

DIODE	
D500	H-8
D502	H-9
D503	E-10
D504	I-10
D505	H-10
D506	I-10
D507	H-9
D600	A-4
D601	C-3
D603	D-4
D604	D-4
D605	C-3
D606	C-3
D607	C-4
D608	F-6
D609	F-6
D610	F-3
D611	F-3
D612	F-4
D613	F-5
D614	F-4
D615	H-3
D616	G-3
D617	F-5
D618	F-7
D619	D-2
D620	E-3
D622	E-3
D625	G-5
D626	G-3
D800	G-9
D801	G-9
D802	F-9
D803	F-9
D807	D-8
D809	A-10
D810	A-10
D812	B-7
D817	H-8
D902	I-2
D903	H-1
D904	H-1
D905	H-2
D906	I-1
D1201	G-3

VARIABLE RESISTOR	
RV301	I-11


B-:SSBE3.<...>-B..-C217
D { HV OUT / PIN OUT / POWER SUPPLY }
CN602 5P
AC-IN
NC
NC
NC
AC-IN
TO F1 BOARD CN604
TO DGC
DGC
NC
DGC
CN601 3P
CN600 2P
DGC CHK
DGC CHK
FOR CHECK
THP600
LF600
LF601
C633 0.1 300V
C634 0.1 300V
C635 0.1 300V
C636 2200P 400V
R629 1M 1/2W
C600 2200P 400V
R630 8.2M 1W
R631 1.8 10W
R642 1.8 10W
D600 D4SB60L-F
C602 4700P 250V
C401 4700P 250V
C603 220 400V
R600 39K 3W
D601 EM1
CN901 5P
GND
SCL
SDA
DIS
NC
OPEN
CN902 50P
SDA
DIS
SCL
GND
N/S
V-OUT
V.ANGLE
GND
E/W
V+OUT
H DRIVE
V-SYNC
HFBP
GND
EHT
ABL
PROT
12V
GND
9V
33V
STBY 5V
GND
SIRCS
SPL
STBY
GND
5V
SPR
GND
STLED
STBY LED
GND
GND
GND
GND
GND
KEY 2
KEY 1
MUTE
H/P R
GND
H/P L
GND
RIN
LIN
VIN
GND
CIN
YIN
TO A BOARD CN001
V.ANGLE
RV301 470K
R517 1.8K 1%
R518 1.8K 1%
R529 470K
AUDIO L
AUDIO R
+5V
+33V
-21V
+9V
+12V
+SAW
EHT
HDRIVE
HFBP
E/W
R833 2.2K :FPRD
R522 22K
R523 22K
C522 10 50V
D504 1SS133
D505 MTZJ-3.6A
D506 1SS133
D507 MTZJ-5.1B
Q501 JC501TP-Q SW
Q502 JA101-Q SW
Q503 DTC144ES SW
R524 4.7K
R525 4.7K
R526 2.2K
C521 10 25V
C523 0.1
C510 220 50V
C507 2.2 50V :BP
C511 0.33 63V
R500 33K 1%
R505 1.2 :FPRD
R507 220 2W
D803 GP08DV.BOOST
R504 8.2K 1%
R506 6.8K 1%
C504 470P
C506 470 25V
C509 0.1
R508 1.8 2W
IC500 STV9379 VERTICAL OUTPUT
V+I/P
VCC
F.B.-PLS
VEE
OUT-PUT
VCC (OUT)
V-I/P
Q601 2SC3852A +7V. REG
D603 MTZJ-6.8C
C604 100 50V
FB601 1.1UH
FB607 1.1UH
C608 1500P 2KV E
R605 0.47 2W :RS
R606 2W 2.5MM
R812 2.2K
R852 18K
R842 330K
R809 820K
C830 50V
R843 150K
C802 JW
R801 10K
R803 5.6K
R805 4.7K
C801 0.01
C838 470P 500V
R847 100K
R846 100K
C832 0.47 50V
R848 220K
PS801 0.4A
R837 18K
D802 1SS133
R849 10K
R813 1K 1W
R814 330
C804 0.1
R800 2.2K
R802 15K
R804 12K
D817 MTZJ5.6B
D801 1SS133
C800 0.0056 :MPS
L809 47uH
C1207 100 25V
D800 1SS133
C834 22 25V
R850 4.7K
R811 5MM (JW)
Q800 JC501TP-Q PIN-OUT
IC800 LM393P PIN-CORRECTION
R917 22
R907 75
R916 22
R902 39 1/2W :RC
R901 39 1/2W :RC
C909 1.0 50V
C906 47 50V
C908 47 50V
C910 0.01 100V
D902 MTZJ9.1
D903 MTZJ9.1
D904 MTZJ9.1
D905 MTZJ9.1
D906 MTZJ9.1
R1204 2.2K
C1209 4.7 50V
C1211 2.2 50V
R1206 8.2K
C1210 2.2 50V
R1205 8.2K
R1203 2.2K
C1208 4.7 50V
IC1201 TDA2822M HEADPHONE AMP
C1214 220 25V
R1202 10 :FPRD
D1202 5MM
Q1204 DTC143TS MUTE
R1217 4.7K
Q1202 DTC114ES MUTE SW
Q1203 DTC143TS MUTE
CN905 3P :S-MICRO
KEY1
KEY2
GND
TO H3 BOARD CN908
CN903 13P :S-MICRO
GND
L
GND
R
GND
V
GND
C
GND
Y
MUTE SW
HP R
HP L
TO H1 BOARD CN906
CN904 6P :S-MICRO
GND
ST5V
SIRCS
+5V RESP
STLED
TO H2 BOARD CN907

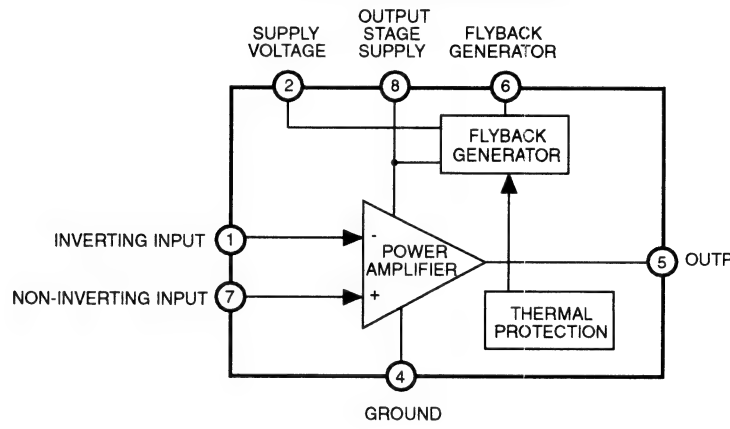

IC601 TLP721GB ISOLATOR
T601 SRT
IC602 SE-135N ERR-AMP
Q605 JC501TP-Q PROTECTION
Q606 DTA144ES PROTECTION
Q602 2SA1667 STBY. SW
Q603 2SC3895 STBY. SW
Q604 2SC2808S STBY. SW
IC605 MCT7812CT +12V. REG
IC606 LM2940CT-9.0 +9V. REG
IC603 LM2940CT-5.0 +5V. REG
IC604 TL750L05CLP +5V. REG
IC600 STR-S6708 POWER CONTROL
Q601 2SC3852A +7V. REG
Q607 JC501TP-Q RELAY-DRIVE
RY600
+135V
135V
33V
+12V
+5V
STBY+5V
-21V
21V
STBYSV
5V
9V
12V
33V
ABL
-15V
+15V
VSYNC
IC500 STV9379 VERTICAL OUTPUT
Q501 JC501TP-Q SW
Q502 JA101-Q SW
Q503 DTA144ES SW
D803 GP08BV.BOOST
T803 FBT UX-1604A2
D810 RGP10GPKG23
D502 RGP15G-15V
D503 RGP15G-15V
D809 RGP02-20E
CN804 6P WHT
G2
+200V
GND
NC
H1
H2
HV
TO
CN803 1P
GND
CN800 6P :BY
V+
V-
H-
H-
H+
H+
IC800 LM393P PIN-CORRECTION
Q800 JC501TP-Q PIN-OUT
Q801 2SC4793 PIN-OUT
Q802 2SC4927-01 H-OUT
Q803 2SC2688L H-DRIVE
Q805 DTC144ES SW
T800 PMT
Q1200 JC501 MUTE. SW
Q1201 DTC143TS MUTE. SW
Q1202 DTC114ES MUTE. SW
Q1203 DTC143TS MUTE
Q1204 DTC143TS MUTE
IC1200 TDA7264 AUDIO-AMP
D1201 MTZJ-3.9B
D812 FMS-3FU
AUDIO L
AUDIO R
CN904 6P :S-MICRO
GND
S15V
SIRCS
+5V
RESP
STLED
TO H2 BOARD CN907
CN1200 4P :S-MICRO
GND
L OUT
GND
R OUT



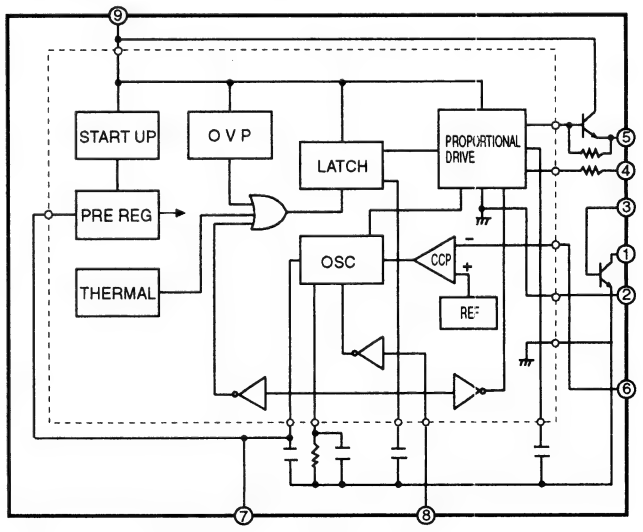
WAVEFORMS D BOARD

① 1.2K Vp-p (H)	② 56.0 Vp-p (V)
⑤ 3.0 Vp-p (H)	⑥ 56 Vp-p (V)
⑨ 3.9 Vp-p (H)	⑩ 1.6 Vp-p (H)
⑬ 5.5 Vp-p (V)	

D BOARD IC500 STV9379



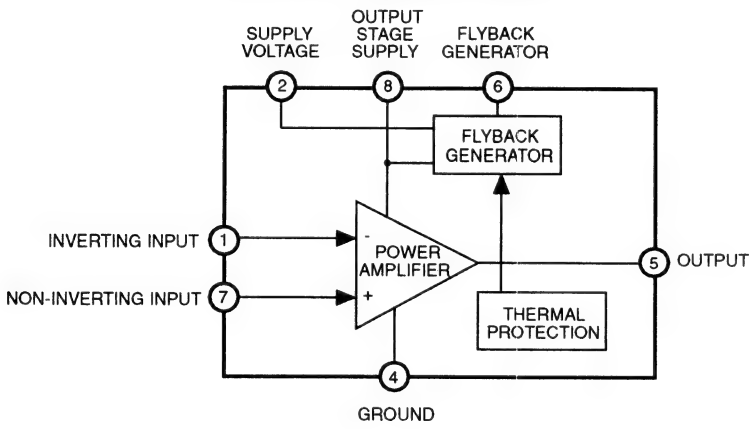
D BOARD IC600 STR-S6708



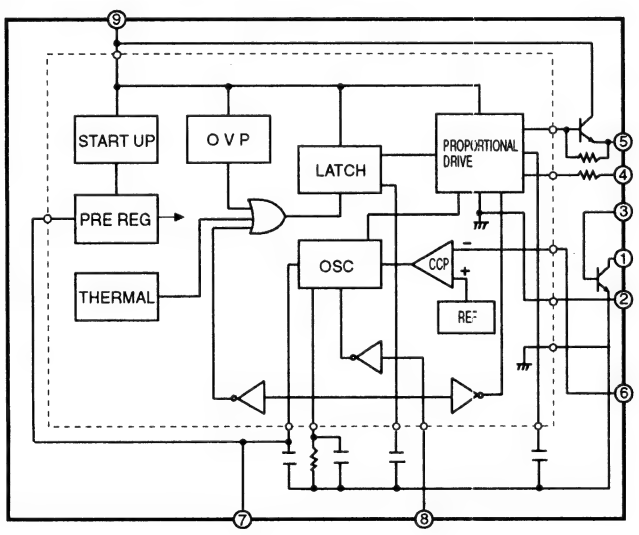
WAVEFORMS D BOARD

① 1.2K Vp-p (H)	② 56.0 Vp-p (V)	③ 11.7 Vp-p (H)	④ 181 Vp-p (H)
⑤ 3.0 Vp-p (H)	⑥ 56 Vp-p (V)	⑦ 31 Vp-p (V)	⑧ 140 Vp-p (H)
⑨ 3.9 Vp-p (H)	⑩ 1.6 Vp-p (H)	⑪ 22 Vp-p (H)	⑫ 3.5 Vp-p (H)
⑬ 5.5 Vp-p (V)			

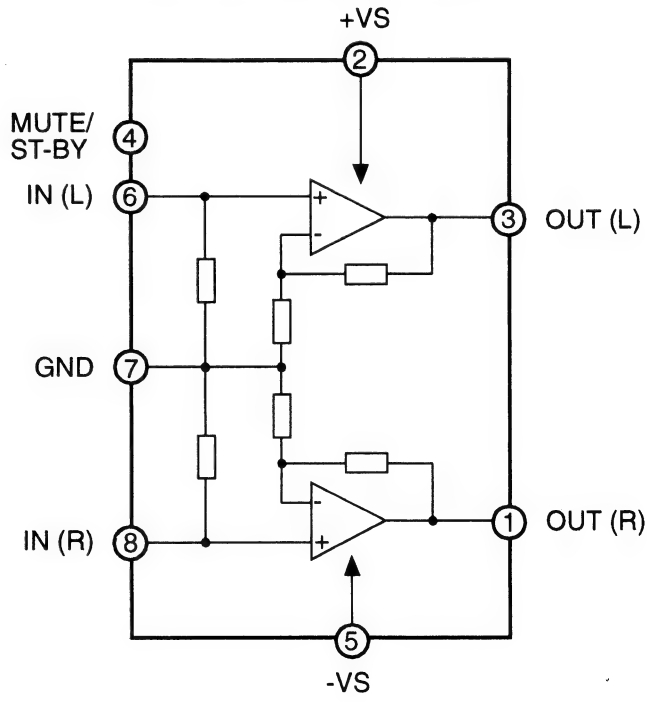
D BOARD IC500 STV9379

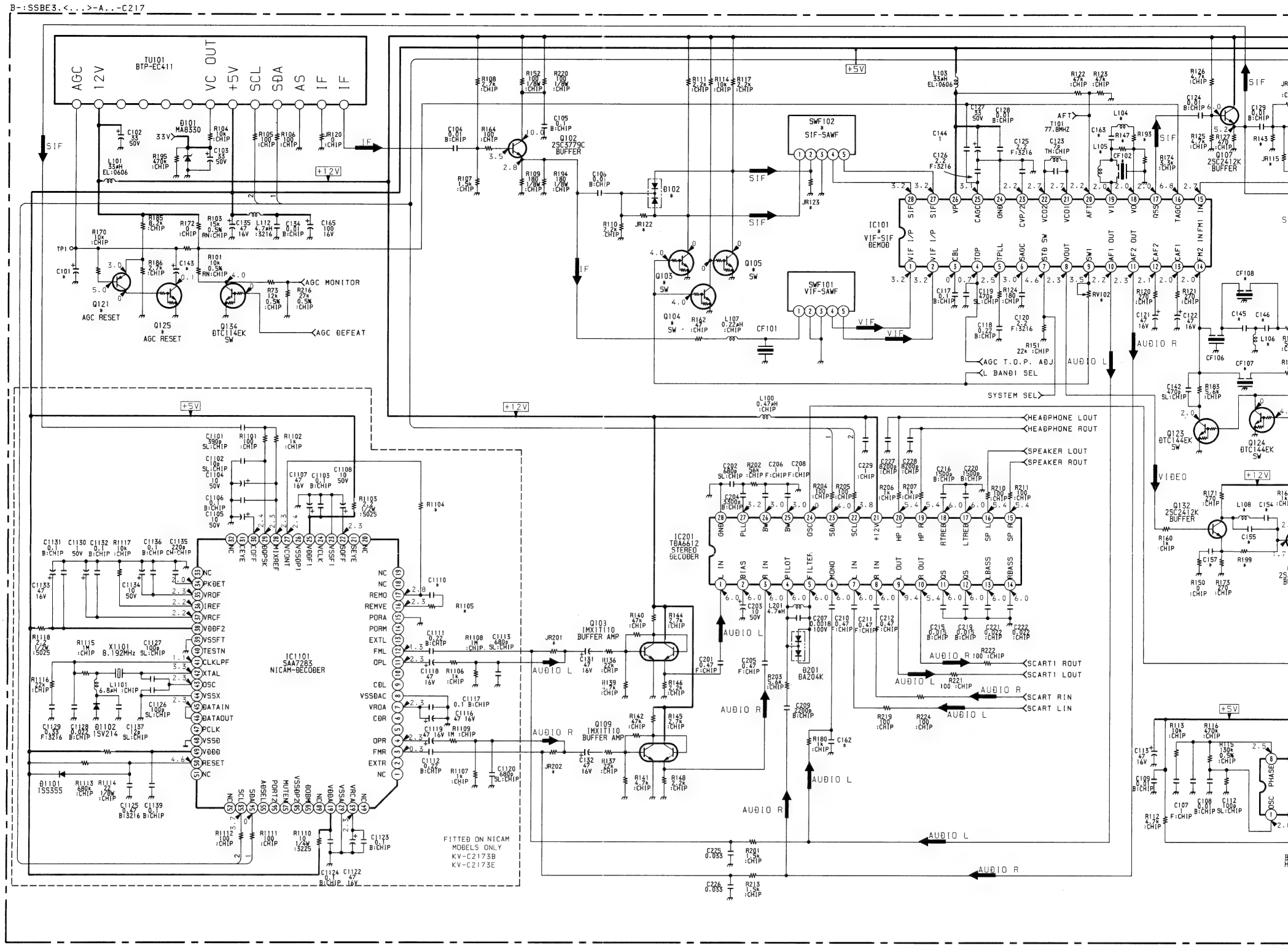


D BOARD IC600 STR-S6708



D BOARD IC1200 TDA7264





WAVEFORMS A BOARD

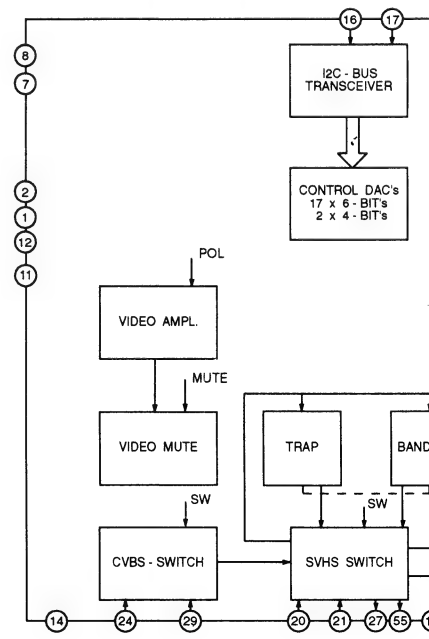
① 3.5 Vp-p (H)	② 3.0 Vp-p (H)	③ PAL.SECAM 2.5 Vp-p (H)	③ NTSC 2.3 Vp-p (H)	④ PAL 0.1 Vp-p (H)
④ SECAM 1.1 Vp-p (H)	④ NTSC 0.9 Vp-p (H)	⑤ 1.0 Vp-p (H)	⑥ 1.4 Vp-p (H)	⑦ PAL.NTSC 1.4 Vp-p (H)
⑦ SECAM 1.1 Vp-p (H)	⑧ PAL 0.8 Vp-p (H)	⑧ SECAM 1.5 Vp-p (H)	⑧ NTSC 0.9 Vp-p (H)	⑨ PAL.SECAM 0.5 Vp-p (H)
⑨ NTSC 0.4 Vp-p (H)	⑩ 1.0 Vp-p (H)			

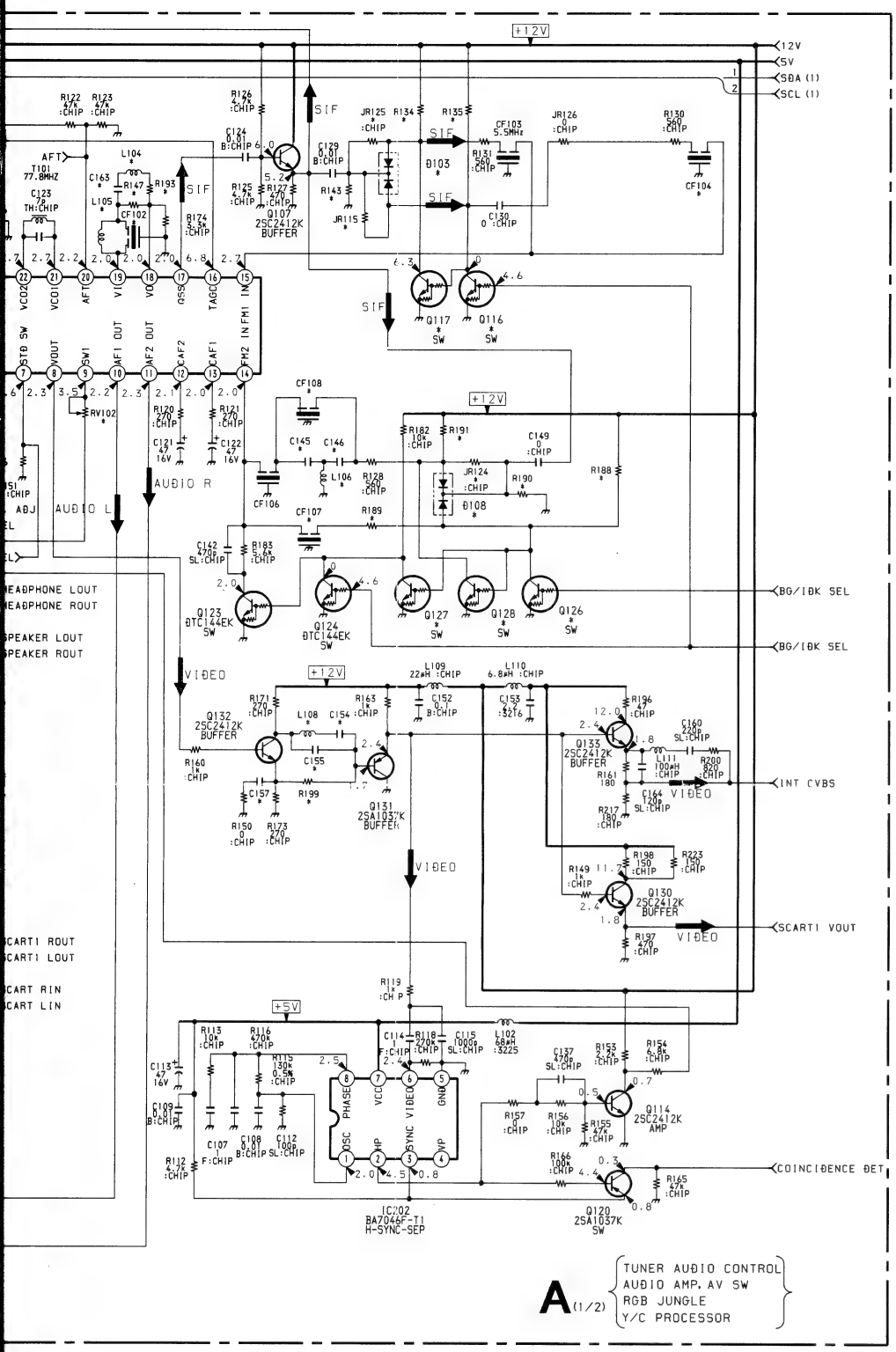
Voltages indicated with the mark * on the schematic diagram are shown in the table below.

A BOARD

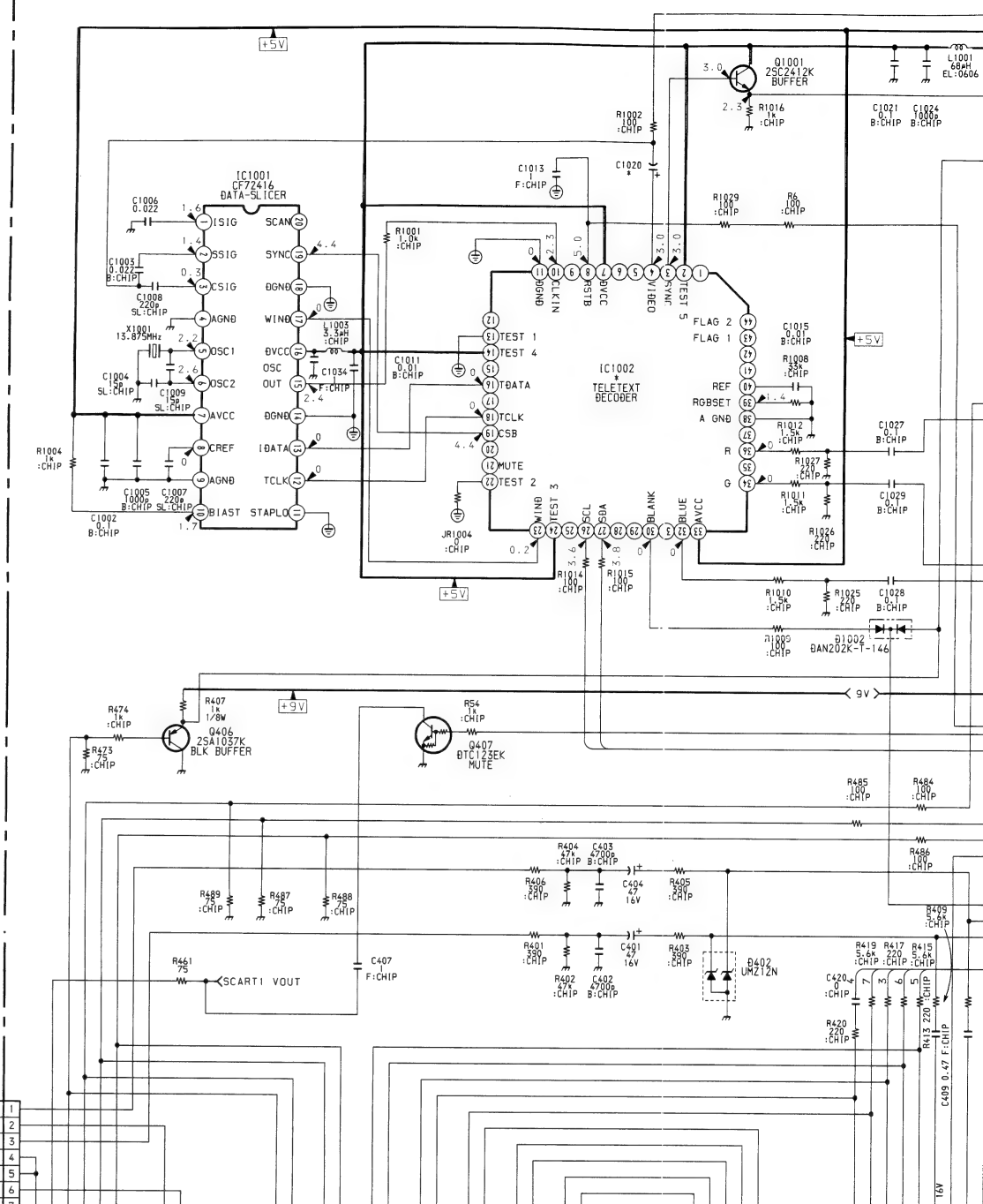
IC	Pin	PAL	SECAM	NTSC 3.58	NTSC 4.43
IC301	17	4.0	4.0	4.0	0
	35	3.6	2.5	3.5	3.5
	44	1.5	3.1	1.5	1.5
	45	1.5	3.0	1.5	1.5
	48	1.7	4.4	1.6	1.7
	49	1.4	1.4	2.0	1.4
	50	2.0	2.0	1.4	2.0
	63	3.4	2.5	2.2	2.5
IC303	1	1.7	4.4	1.6	1.7
	11	1.5	3.0	1.5	1.5
	12	1.5	3.1	1.5	1.5

A BOARD IC301 TDA8366

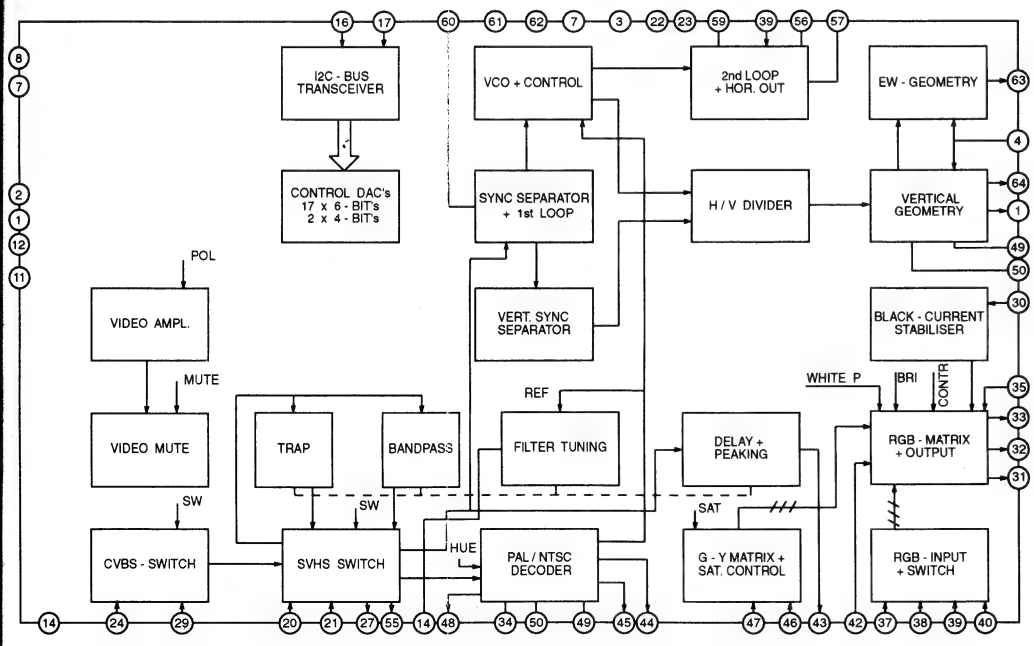


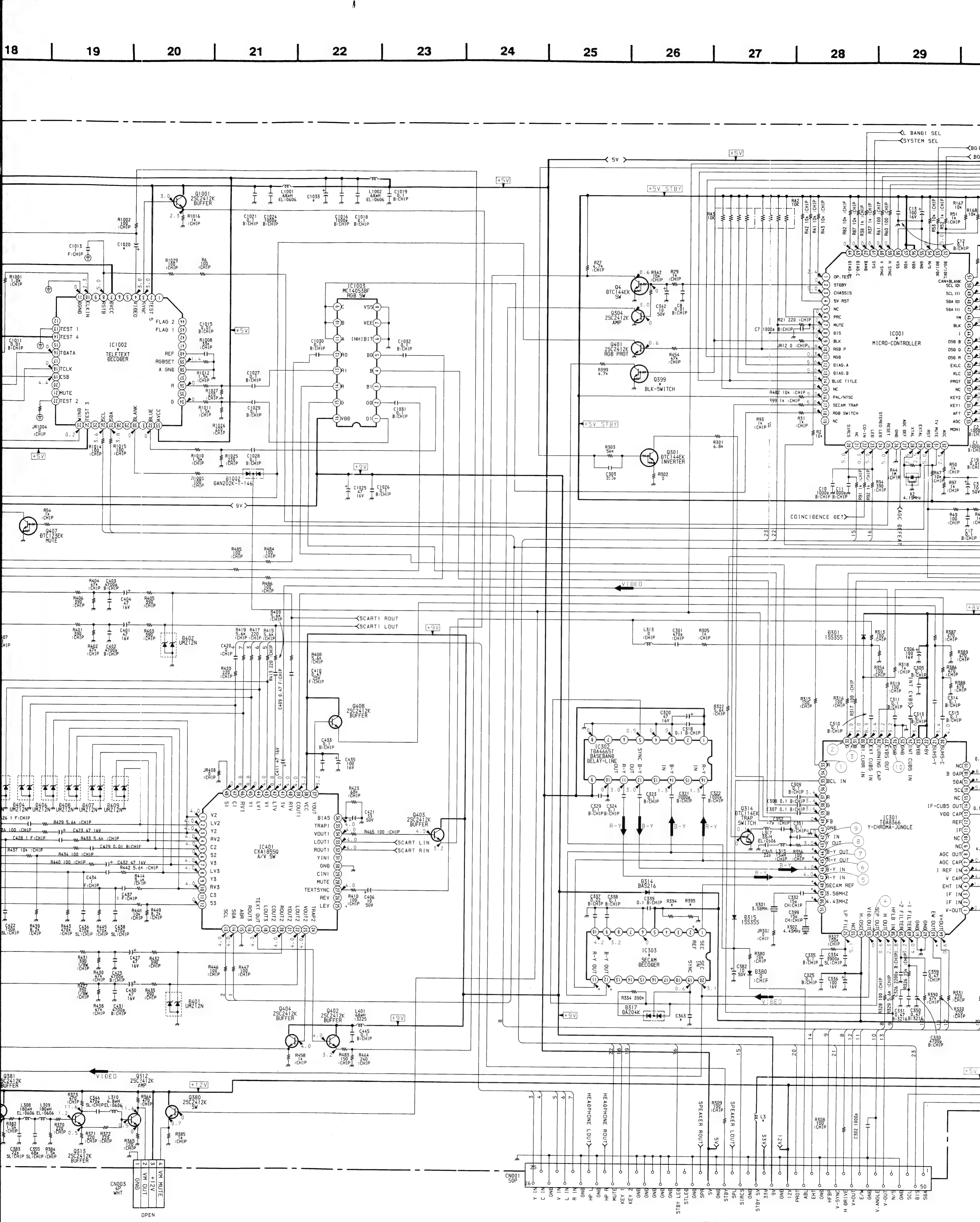


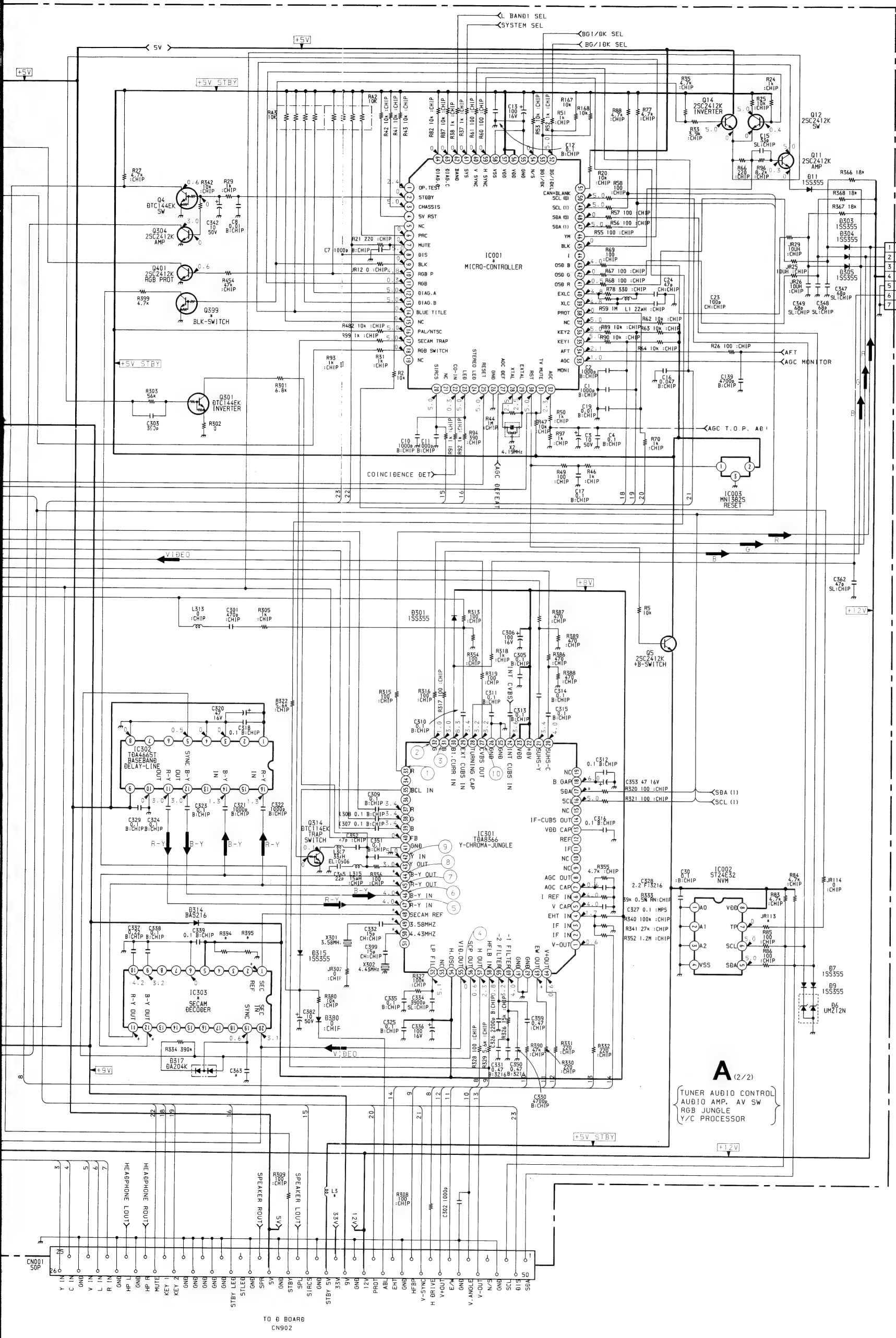
B-:SSBE3.<...>-A..-C217



A BOARD IC301 TDA8366




IC1002 TELETEXT DECODER
IC1003 MC14053BF RGB SW
IC401 CXA1855Q A/V SW
IC001 MICRO-CONTROLLER
IC301 TDA8566 Y-CHROMA-JUNGLE
IC302 TDA4665T BASEBAND DELAY-LINE
IC303 SECAM DECODER
Q1001 2SC2412K BUFFER
Q1002 DAN202K-T-146
Q407 DTC123EK MUTE
Q408 2SC2412K BUFFER
Q403 2SC2412K BUFFER
Q404 2SC2412K BUFFER
Q402 2SC2412K BUFFER
Q4 DTC144EK SW
Q304 2SC2412K AMP
Q401 2SC2412K RGB PROT
Q399 BLK-SWITCH
Q301 DTC144EK INVERTER
Q314 DTC114EK TRAP SWITCH
Q381 2SC2412K BUFFER
Q512 2SC2412K AMP
Q380 2SC2412K SW
Q313 2SC2412K BUFFER
D1002 DAN202K-T-146
D402 UMZ12N
D401 UMZ12N
D404 UMZ12N
D406 UMZ12N
D408 UMZ12N
D407 UMZ12N
D409 UMZ12N
D301 1SS355
D314 BA5216
D315 1SS355
D380
D317 DA204K
L1001 68nH EL-0606
L1002 68nH EL-0606
L308 180nH EL:0606
L309 180nH EL:0606
L310 6.8nH EL:0606
L401 68nH :3225
L313
X301 3.58MHz
X302 4.43MHz
X2 4.19MHz
JR1004
JR408
JR12 0
CN003 4P WHT
OPEN
CN001 50P
TO Ø BOARØ CN902
+5V
+5V STBY
+9V
+12V
5V
9V
VIDEO
SCART1 ROUT
SCART1 LOUT
SCART LIN
SCART RIN
L BANØ1 SEL
SYSTEM SEL
COINCIDENCE DET
AGC DEFEAT
HEADPHONE LOUT
HEADPHONE ROUT
SPEAKER ROUT
SPEAKER LOUT

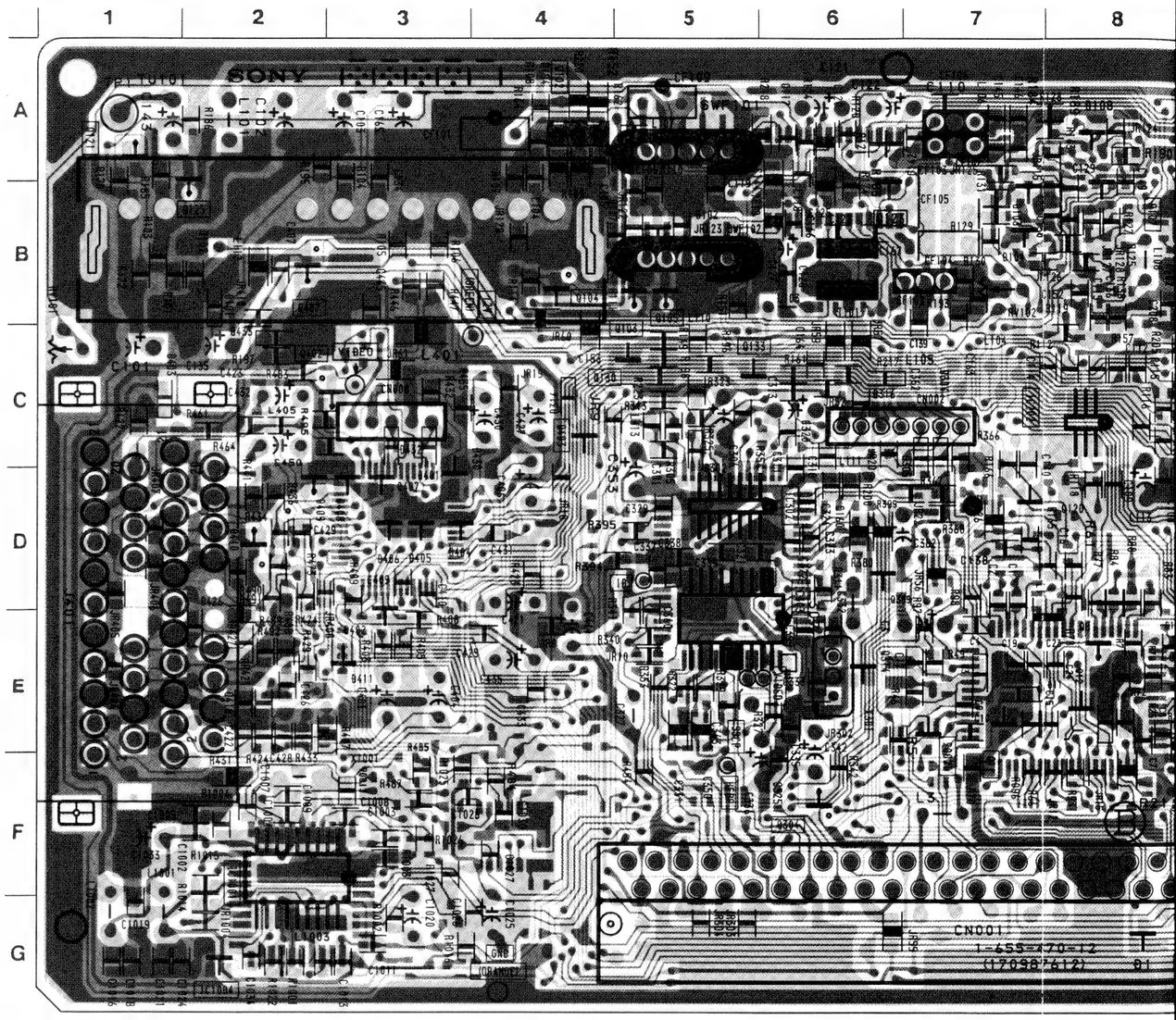

L BAND1 SEL
SYSTEM SEL
BG1/DK SEL
BG/I/DK SEL
5V
+5V
+5V STBY
IC001
MICRO-CONTROLLER
Q14 2SC2412K INVERTER
Q12 2SC2412K SW
Q11 2SC2412K AMP
Q4 DTC144EK SW
Q304 2SC2412K AMP
Q401 2SC2412K RGB PROT
Q399 BLK-SWITCH
Q301 DTC144EK INVERTER
AFT
AGC MONITOR
AGC T.O.P. ADJ
COINCIDENCE DET
IC003 MN1382S RESET
CN002 7P WHT
R OUT
G OUT
B OUT
+12V
GND
AUTO CUTOFF
GND
TO C BOARD CN703
VIDEO
+8V
Q5 2SC2412K +B-SWITCH
IC302 TDA4665T BASEBAND DELAY-LINE
IC301 TDA8366 Y-CHROMA-JUNGLE
Q314 DTC114EK TRAP SWITCH
IC303 SECAM DECODER
IC002 ST24E32 NVM
IC003 MN1382S RESET
SDA (1)
SCL (1)
A (2/2)
TUNER AUDIO CONTROL
AUDIO AMP. AV SW
RGB JUNGLE
Y/C PROCESSOR
CN001 50P
TO B BOARD CN902

A BOARD * MARK

Ref. No.	C2173B	C2171D	C2173E	C2171K	C2171KR
C101	4.7MF 50V	22MF 50V	22MF 50V	22MF 50V	22MF 50V
C143	100MF 16V	–	–	–	–
C145	–	0 : CHIP	0 : CHIP	–	–
C146	–	0 : CHIP	0 : CHIP	–	–
C154	33P	68P	68P	68P	68P
C155	–	18P	18P	18P	18P
C157	68P	33P	33P	33P	33P
C162	0.012MF	–	–	–	–
C163	0.001MF	–	–	–	–
C363	22P	22P	22P	–	–
C1020	–	22MF 50V	22MF 50V	22MF 50V	22MF 50V
C1033	–	10MF 50V	10MF 50V	10MF 50V	10MF 50V
CF102	5.5MHz/6.6MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz
CF104	6.0MHz	6.5MHz	–	6.5MHz	6.5MHz
CF107	–	–	–		
CF108	6.0MHz	–	–	–	–
D102	DAN202K	–	–	–	–
D103	DAN202K	DAN202K	–	DAN202K	DAN202K
D108	–	–	–	DAN202K	DAN202K
IC001	CXP85340A-117Q	CXP85340A-117Q	CXP85340A-116Q	CXP85340A-117Q	CXP85340A-117Q
IC101	TDA9814T/V2	TDA9813T	TDA9813T	TDA9813T	TDA9813T
IC1002	CF70200FN	CF70203FN	CF70200FN	CF70203FN	CF70209FN
JR51	–	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP
JR113	–	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP
JR115	–	–	–	0 : CHIP	0 : CHIP
JR122	–	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP
JR123	–	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP
JR124	0 : CHIP	0 : CHIP	0 : CHIP	–	–
JR125	–	–	0 : CHIP	–	–
JR201	–	0 : CHIP	–	0 : CHIP	0 : CHIP
JR202	–	0 : CHIP	–	0 : CHIP	0 : CHIP
L3	68uH	–	–	–	–
L104	100uH	–	–	–	–
L105	5.6uH	12uH	12uH	12uH	12uH
L106	0 : CHIP	–	–	–	–
L108	27uH	39uH	39uH	39uH	39uH
Q103	DTC114EK	–	–	–	–
Q104	DTC114EK	–	–	–	–
Q105	DTC114EK	–	–	–	–
Q116	DTC144EK	DTC144EK	–	–	–
Q117	DTC144EK	DTC144EK	–	–	–
Q121	2SA1037K	–	–	–	–
Q125	DTC114EK	–	–	–	–
Q126	–	–	–	DTC144EK	DTC144EK
Q127	–	–	–	DTC144EK	DTC144EK
Q128	–	–	–	DTC144EK	DTC144EK
Q305	–	–	JC501	–	–
Q399	DTC144EK	–	–	–	–
R134	2.2K	2.2K	–	2.2K	2.2K
R135	2.2K	2.2K	–	2.2K	2.2K
R143	2.2K	2.2K	–	–	–
R147	180	220	220	220	220
R188	–	–	–	2.2K	2.2K
R189	–	–	–	1K	1K
R190	–	–	–	2.2K	2.2K
R191	–	–	–	2.2K	2.2K
R193	1K	–	–	–	–
R199	1.2K	1K	1K	1K	1K
R304	–	–	10K	–	–
R394	2.2K	–	2.2K	–	–
R395	1K	–	1K	–	–
RV102	22K	–	–	–	–
SWF102	K9453M	K9350M	K9350M	K9350M	K9350M

A [TUNER AUDIO CONTROL
AUDIO AMP, AV SW
RGB JUNGLE, Y/C PROCESSOR]

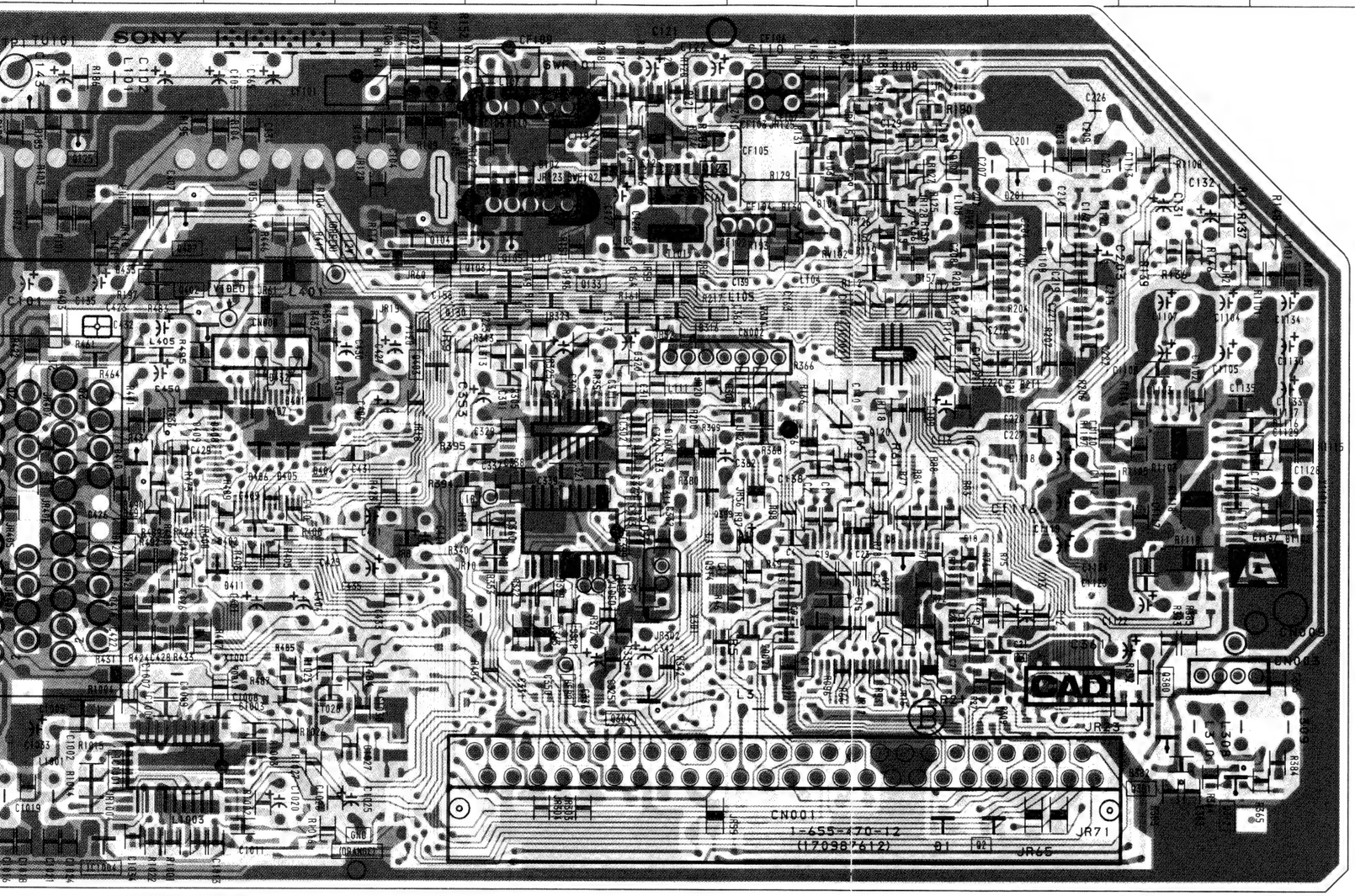
— A BOARD —

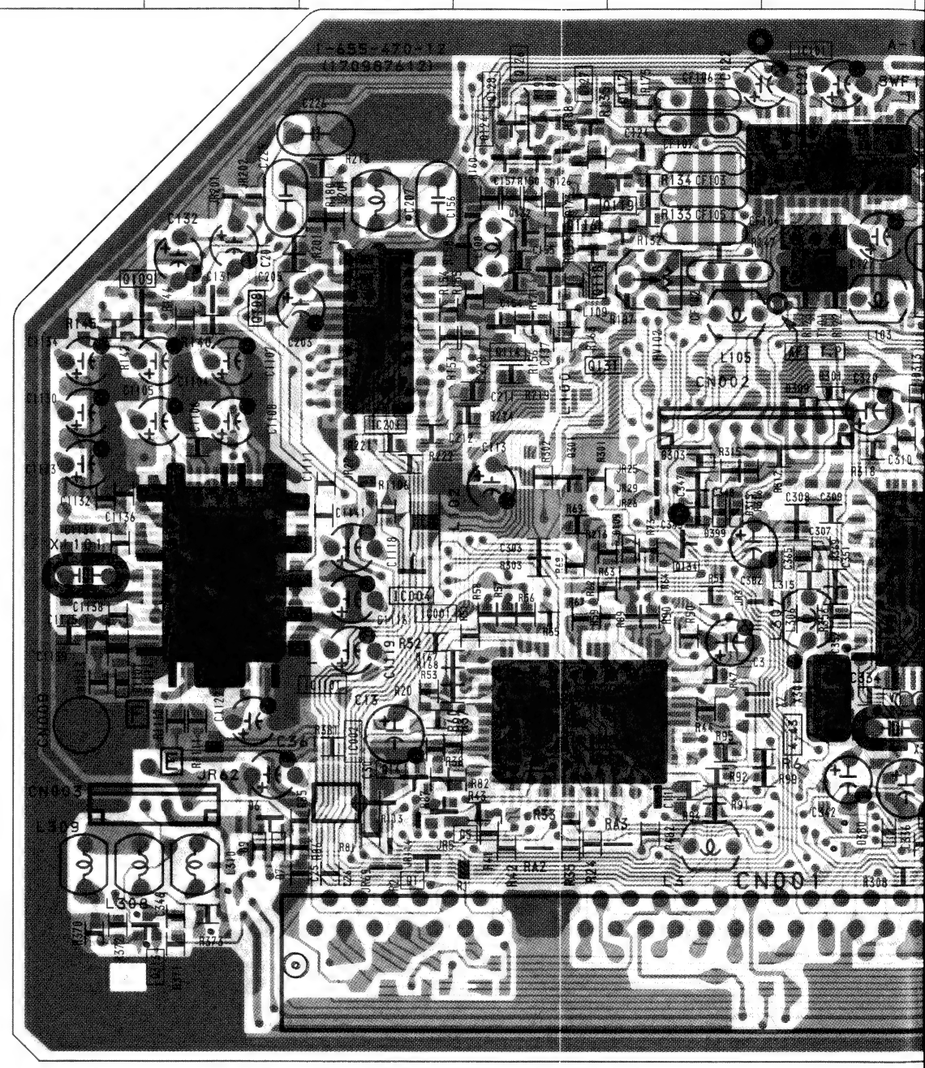


TUNER AUDIO CONTROL
AUDIO AMP, AV SW
RGB JUNGLE, Y/C PROCESSOR

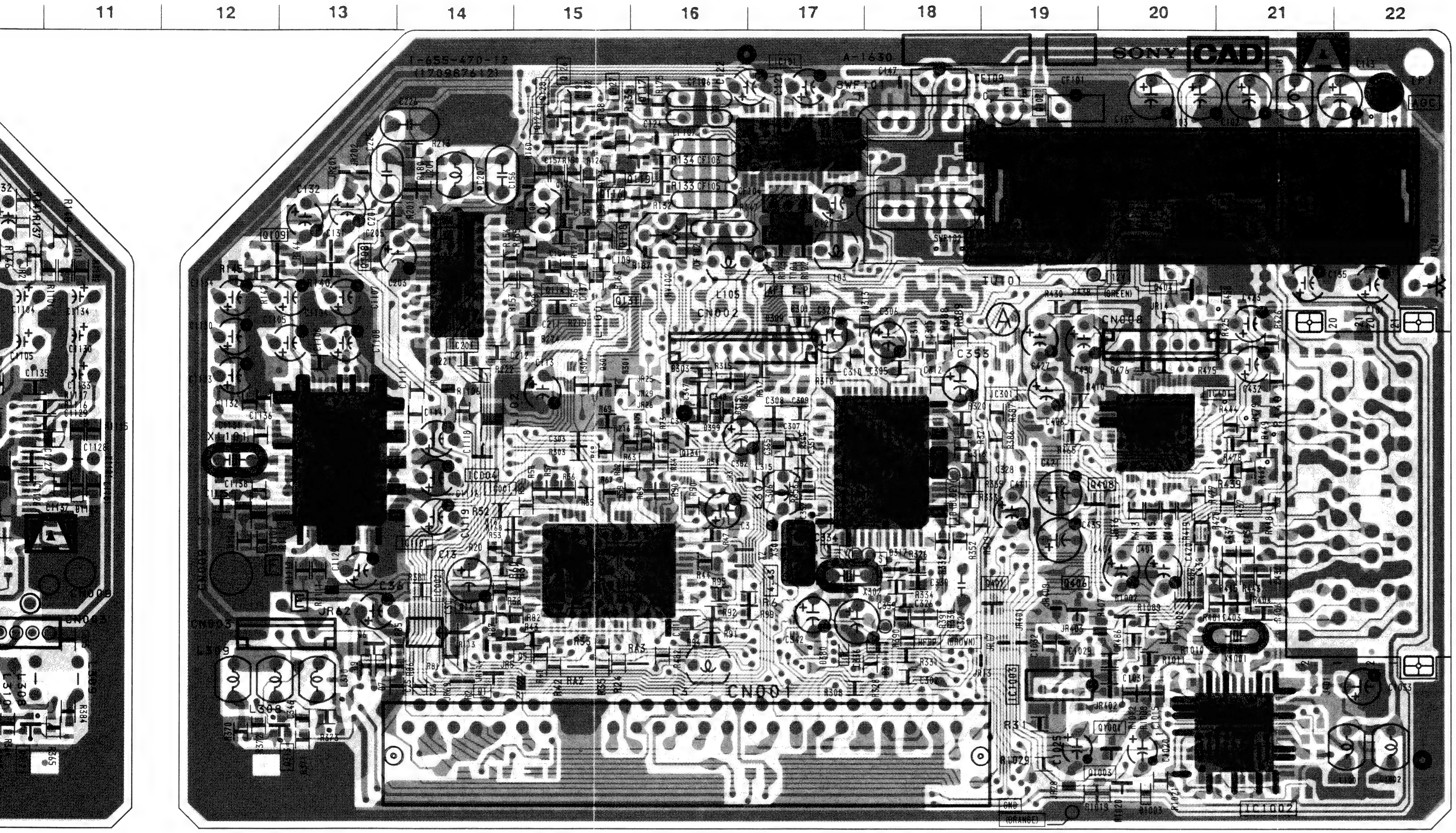
OARD —

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17





KV-C217



A BOARD

IC	
IC001	E-15
IC002	E-14
IC003	E-7
IC101	A-17
IC201	C-14
IC202	C-8
IC301	D-19
IC302	E-6
IC303	E-6
IC401	D-21
IC1001	F-2
IC1002	G-21
IC1003	F-19
● IC1101	E-14

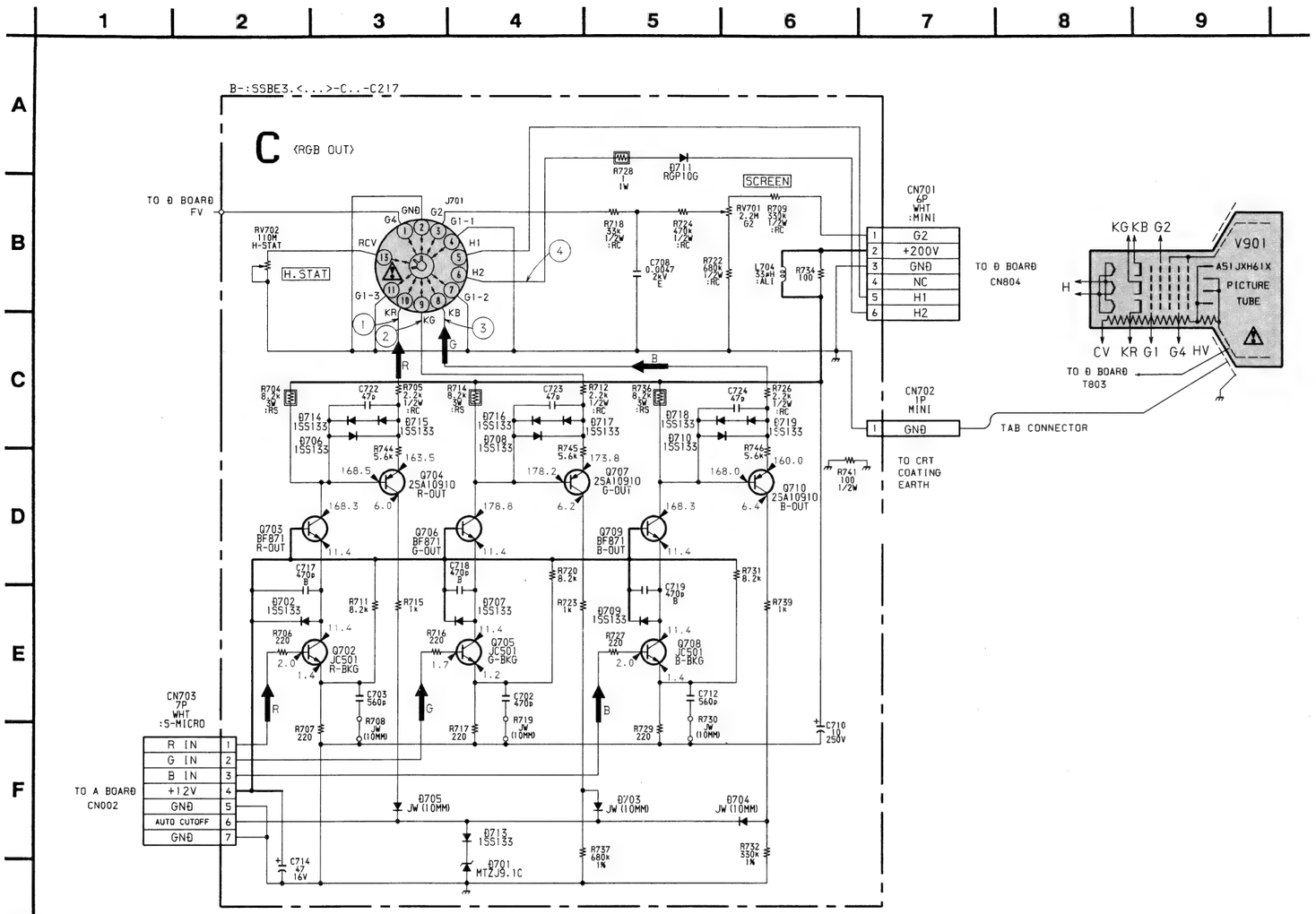
TRANSISTOR	
Q4	F-9
Q5	F-15
Q11	F-7
Q12	E-8
Q14	E-14
Q102	A-4
○ Q103	C-5
○ Q104	B-4
○ Q105	B-5
Q107	B-8
Q108	B-13
Q109	B-13
Q114	C-15
Q116	B-16
Q117	A-16
Q120	D-8
Q121	A-1
Q123	B-6
Q124	A-15
○ Q125	B-2
■ Q126	A-15
■ Q127	A-15
■ Q128	A-15
Q130	C-5
Q131	C-16
Q132	B-15
Q133	C-6
Q134	D-16
Q301	C-16
Q304	F-6
Q312	G-11
Q313	G-13
Q314	E-6
Q380	F-10
Q381	G-10
Q399	D-7
○ Q401	E-19
Q402	C-2
Q403	C-4
Q404	C-20
Q406	E-20
Q407	B-2
Q408	D-20
Q1001	G-20

DIODE	
D6	F-14
D7	F-14
D9	F-13
D11	E-8
D101	B-2
○ D102	B-5
□ D103	B-7
■ D108	A-8
D201	B-9
D301	C-17
D303	C-16
D304	C-7
D305	C-7
D314	C-4
D315	D-17
D317	E-18
D380	F-17
D401	D-3
D402	E-3
D404	D-3
D405	D-3
D406	D-3
D407	D-3
D408	D-3
D409	D-3
D410	D-2
D411	E-3
D1002	E-20
● D1101	E-13
● D1102	E-11

VARIABLE RESISTOR	
○ RV102	B-16

○ mark : KV-C2173B only
● mark : KV-C2173B and C2173E only
□ mark : KV-C2173B, C2171D, C2171K and C2171KR only
■ mark : KV-C2171K and C2171KR only

Note:
- (light pattern) : Pattern from the side which enables seeing.
- (dark pattern) : Pattern of the rear side.

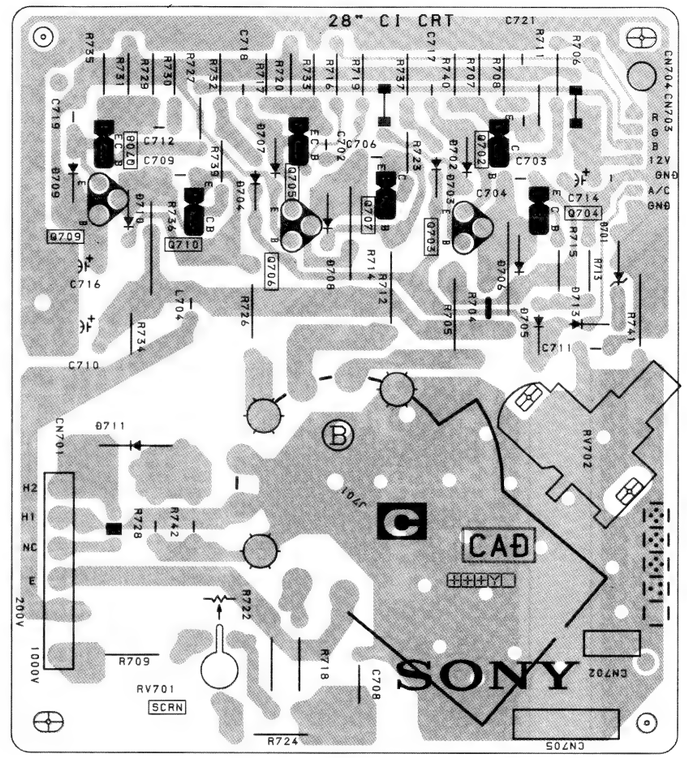


WAVEFORMS C BOARD

①	②	③	④
103 Vp-p (H)	76.0 Vp-p (H)	100 Vp-p (H)	18.5 Vp-p (H)

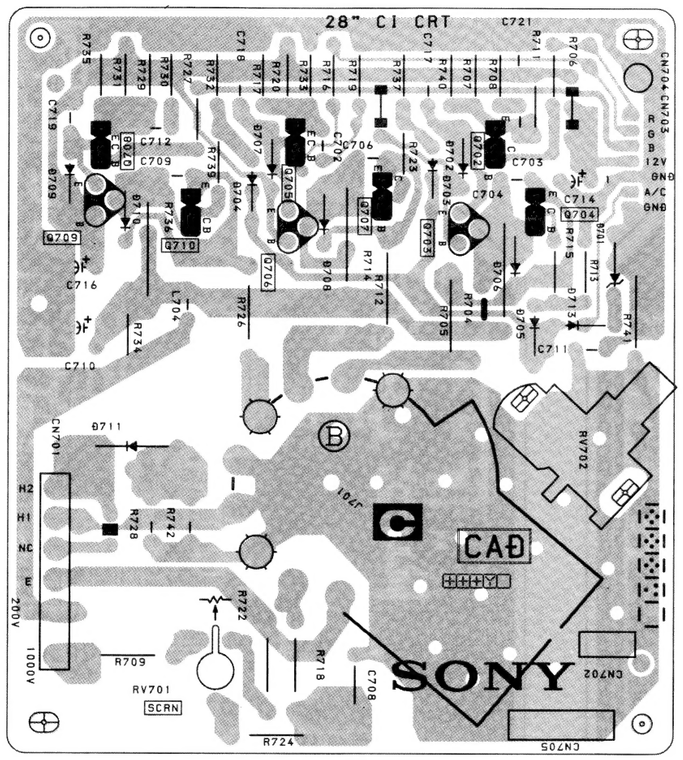
C [RGB OUT]

— C BOARD —



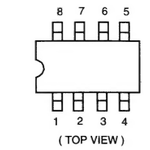
C [RGB OUT]

— C BOARD —



5-4. SEMICONDUCTORS

BA7046F



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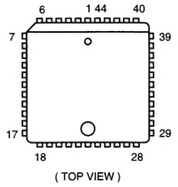
CF70203FN-F
CF70209FN-R



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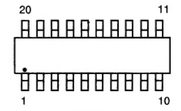
TDA8395T



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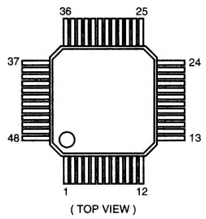

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SAA7283GP
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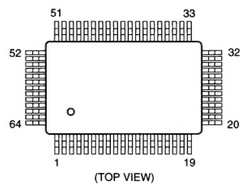

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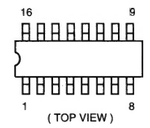
MC14053BF



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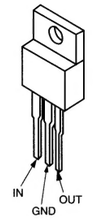
LM2940CT-9.0
MCT7812CT
TA7812S
µPC2405HF



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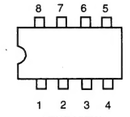

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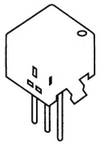
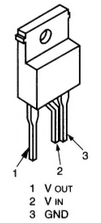
SBX1790-51



SE-135N
SE135N-LF12



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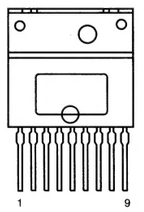

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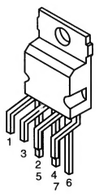

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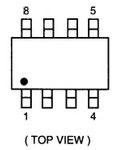

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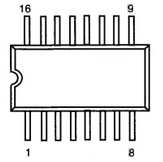

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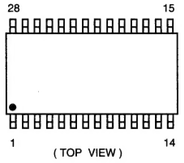

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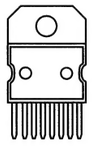

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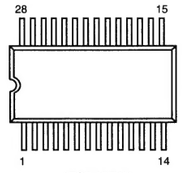

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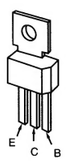

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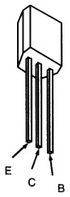
DTC114ES
DTC143TS
DTC144ES



DTC114EK
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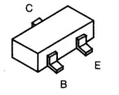

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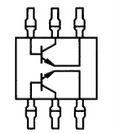

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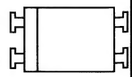

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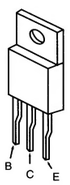
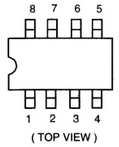


5-4. SEMICONDUCTORS

BA7046F



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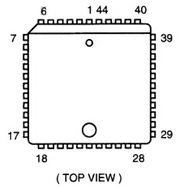
CF70203FN-F
CF70209FN-R



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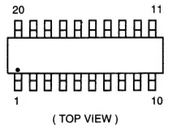

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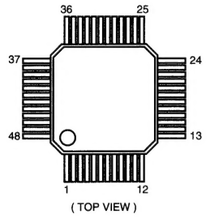

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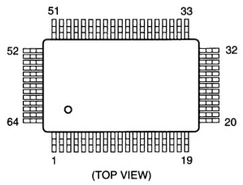

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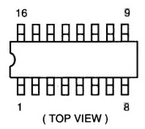
MC14053BF



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LM2940CT-9.0
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TA7812S
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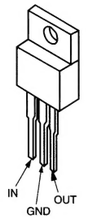

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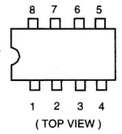

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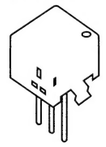

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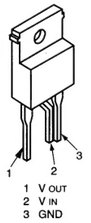

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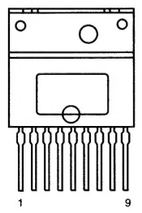

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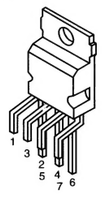

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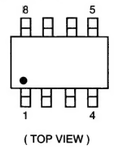

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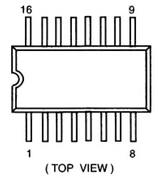

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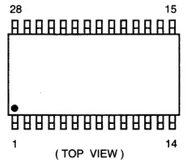

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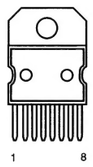

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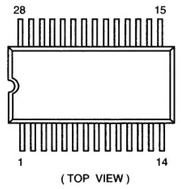

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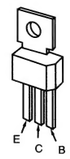

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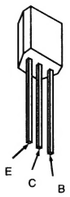
DTC143TS
DTC144ES



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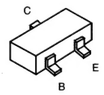

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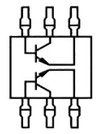
IMX1



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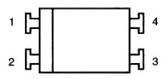

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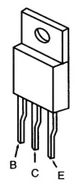

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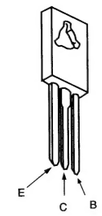

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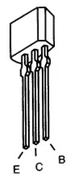

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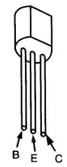

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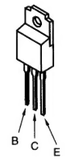

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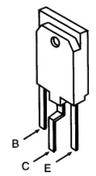

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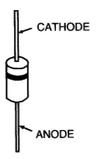
EL1Z	RGP10GPKG23
EM1-V1	RGP15GPKG23
EU-1-V1	RU-3YX-V1
EU-1Z	RU4AM
EU-1Z-V1	RU4DS



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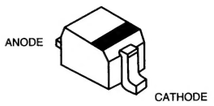

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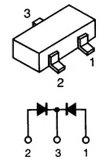

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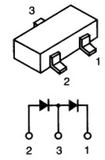

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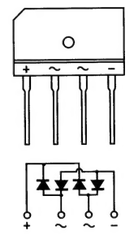

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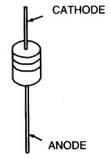
MTZJ-3.6A	MTZJ-39C
MTZJ-3.9B	RD3.9ESB2
MTZJ-4.7B	RD5.1ESB2
MTZJ-5.1B	RD5.6ESB2
MTZJ-5.6B	RD6.8ESB2
MTZJ-6.8C	RD7.5ESB2
MTZJ-7.5C	RD9.1ESB3
MTZJ-T-77-9.1	UZ-4.7BSC
MTZJ-T-77-9.1A	1SS133T-77



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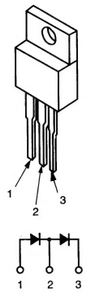

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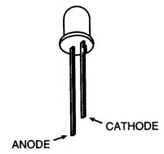
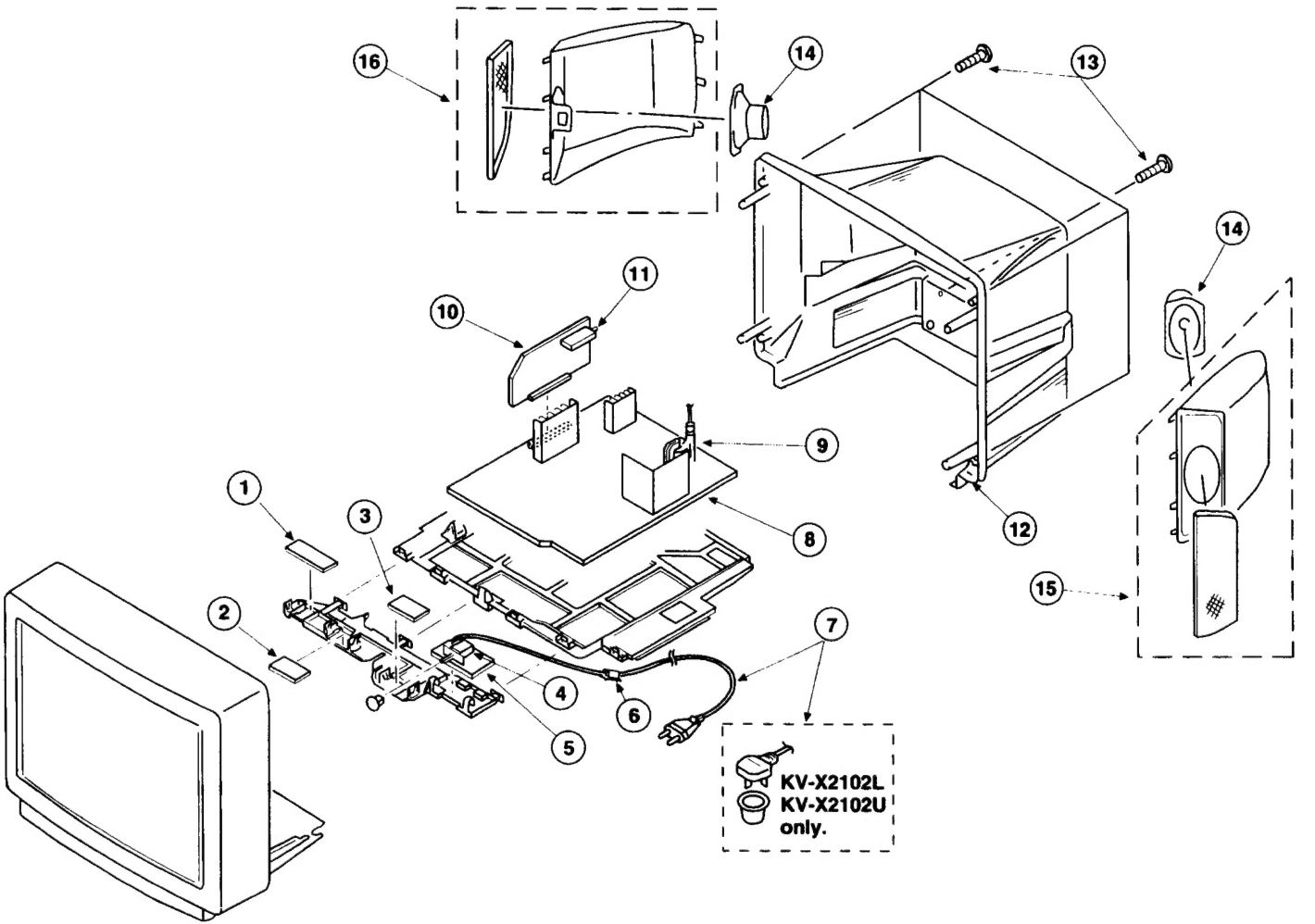
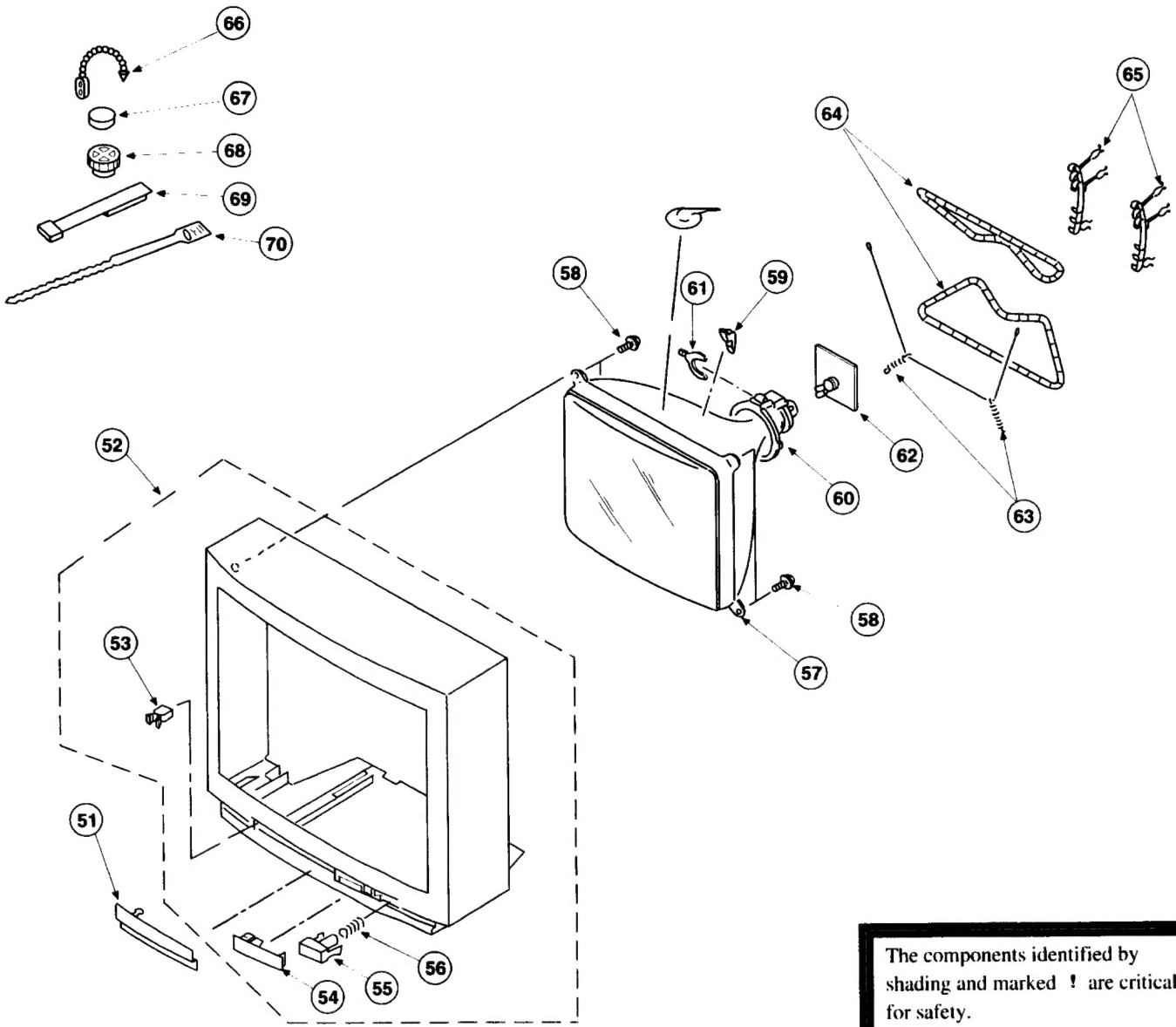


6-1. CHASSIS



6-2. PICTURE TUBE



The components identified by shading and marked ! are critical for safety.
Replace only with the part number specified.